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HARDY TREES SHRUBS & PLANTS



CAPITAL CITY NURSERIES

Since 1869

DES MOINES, IOWA



—RUSKIN.

Capital City Nurseries

Not all the statements made in this book will directly help us sell our products, but they tell you the **exact truth**. If a variety has a fault or a weakness in your locality, we advise you before you order; then there should be no disappointment after planting.

Many varieties of trees and plants which thrive in the seaboard and lake-shore states, do not succeed out here in the prairie country. Even within our own state, varieties which do well in one section, may prove complete failures in another. Don't be too easily satisfied about varieties, for upon your selection largely depends the success of your planting. Study the catalogue, consult the zone map, or write us, when in doubt. We keep our local representatives fully posted and you will do well to be guided by their recommendations.

Our nurseries are located along the south limits of Des Moines, on and around the old Watrous Homestead, where good trees and plants have been grown since 1869. Come and see us. A warm welcome always awaits you for during the growing season, our nurseries present a beautiful and interesting study, well worth your while.

Our nursery stock is kept pure and true to name. Every variety is staked in nursery and labeled before shipment. If you make a new planting and keep a record of same, we guarantee varieties true to name or stand liable for **three times** the original purchase price.

Spring packing season begins about April first and extends into May, depending upon the season. This is a very busy period for us and customers desiring personal attention given their orders must place same early, before the rush. Fall digging and packing commences with peonies and perennials in September and winds up with trees about October fifteenth.

Many items of stock succeed best when planted in the fall. Some stock, like Tulips, Hyacinths, Narcissus and the like are supplied only for fall planting. All hardy perennials, including peonies, **always** bloom the first season when planted in the fall. Most other stock, excepting strawberries and evergreens, succeeds best when delivered in the fall. In the south, the stock should be planted at once, using plenty of water; in the north, the fruit trees should be buried, **root and branch**, in a pit over winter, and set out as early in the spring as the ground can be worked. Following this method our customers seldom lose a tree or plant. Orders for evergreens and strawberries are accepted by us for spring delivery only.

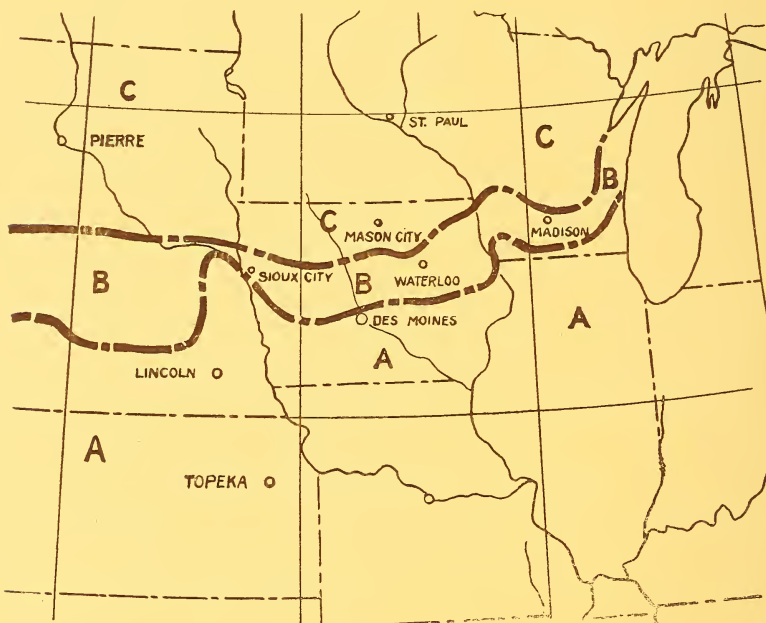
Since each class of trees or plants requires special cultural instructions, same are placed at the beginning of each class throughout this catalogue. Study them carefully so far as

they apply to the stock you order—**before** planting time comes.

Following are a few general instructions which apply to all transplanting:

First. No matter what your soil or location may be, you can have fruit, shade and flowers, if **you select the right varieties.**

Second. Watch the Zone Map closely and confine your selection altogether to varieties marked as adapted to **your** zone.



Zone map showing horticultural latitudes of the middle west. If you live in Zone B and C be careful about planting varieties recommended for Zone A only.

Third. Plow or spade the ground well **before** you plant.

Fourth. Plant all trees four to six inches deeper than they stood in nursery; dig large holes; use surface soil in filling about the roots; plenty of water when the hole is three-quarters filled; then fill in the rest of the soil **after** the water has all soaked away.

Fifth. Cut out all weak branches entirely; cut back the other branches one-half to two-thirds of their total length; be sure to make a fresh slant cut on all the larger root ends. Except when transplanting, never prune any trees or plants during April and May.

Sixth. Cultivate once a week till July first, then mulch with straw or litter, three to five inches deep.

Seventh. Consult page (85) for the very best amateur's formula on spraying, for both insects and diseases.

THE LANDSCAPE

The landscape, in all its phases, is rapidly coming into its own, here in the Middle West. During the pioneer stage, the purpose of the nurseryman's catalogue was to promulgate an ideal. Now, our purpose is to offer sound, sensible information in order that the conception of ideals may more thoroughly conform to the proper use of plant materials—trees, shrubs and herbaceous plants.

THE LANDSCAPE ARCHITECT

With the coming of the professional landscape architect, trained men are available to put into practice the principles of design and composition that is harmonious in its parts and enduring in its beauty. Development of any size should never be attempted without the advice or direction of the professional landscape architect. Although we have technically trained university men in charge of our service department, they do no professional work, because —

(1) We have within the borders of our state the best trained landscape architects in the Middle West.

(2) Our service department is kept busy carrying out the plans of the professional men and in educating our representatives and customers along lines of simple design, thus assuring satisfactory results in the thousand of homes where the professional architect is not required.

THE CATALOGUE

This little book does not profess to be a work of art or a catalogue in the usual sense. True it tells of the products of our nurseries, but we hope it carries the message of service. Its pages will give you information as complete, as accurate and as up-to-date as our fifty years in the field of horticulture can warrant. There will be no sales talk, no glowing descriptions of unworthy plants, no snappy pictures to catch the eye of the unwary. Rather, our aim throughout will be to describe exactly and simply, the plant, its environment, hardiness and culture.

SERVICE

The propagation of a tree or plant and its dissemination, has been too long the ultimate and final aim of the nursery-

man. Much of the success of the planting depends upon culture and care after transplanting. Too often the good faith customer meets with failure and disappointment, simply because he did not know how or when or in what form the care and culture should be administered. Our service department has been re-organized to care for the many forms of horticultural activity. Its immediate scope includes planting pruning, cultivation, spraying, tree surgery, large tree moving and kindred lines of construction and maintenance. Its broader field lies in helping you work out your horticultural problems. No matter where or how you are situated or what your problem may be, tell us about it. Advice and counsel are freely given at all times; personal demonstration or superintendence, wherever practical.

We invite the attention of all out-door lovers to the following pages. Therein is listed the material we know will be suitable to the various needs of our customers and clients.

Deciduous Ornamental Trees

A tree is a tree, one ordinarily says and goes no further in either thought or statement—and yet how many of us can spend a day among trees and not experience a subtle influence, an all pervading charm, a something instilled into our being that demands recognition and tends to belittle the small things in our lives. A tree is a tree and a wonderful thing. It comes more nearly having a personality than some people. The ponderous dignity of a great oak or the simple grace of a drooping elm are among the most expressive things nature has to offer. To say the least, they are most thoroughly wholesome and substantial to live with and should be given a fitting place in all our landscape schemes.

Remember always, that each tree has its individuality; its particular niche to fit; that its use can never be general like that of shrubbery. And moreover, don't make the mistake of getting trees from the woods for unless you go out a year beforehand to trench around the trees you want, thereby developing a better system of fibrous roots; you will be disappointed with timber dug trees. Nursery grown shades are frequently transplanted to produce a good root system; are cut off just above the ground when two years old, to form a fine, straight stem. Later the tops are "stubbed" to get a heavier stem and a more shapely and better proportioned tree.

Please note that following the description of varieties, we have given the season of bloom, the ultimate height growth; also the degree of hardiness as shown by the zone areas.

RECORDED 10 1922

MAPLE

ACER—Probably the best known and most appreciated group of trees. They come from every continent and are adaptable in some form to most any use and place. In the main they are extremely hardy and always ornamental, with handsome foliage which gives most remarkable fall coloring in shades of gold and scarlet. All are strong growers with a sturdy, interesting winter net of branches.

—**DASYCARPUM. (White, Soft or Silver Maple).**

A tree very much overplanted in the pioneer stages of the middle west and now depreciated more than it deserves. Very fast grower with wide spreading branches which should be cut back heavily the third year to prevent splitting or breaking. Rich, moist soil is best, while marshy soil gives most brilliant fall coloring. 100-125' ABC.

—**var. Weiri. (Cut-leaved Maple).**

Very finely divided foliage. More drooping than type. Smooth, handsome bark. 80-100' ABC.

—**NEGUNDO. (Box Elder).**

Very rapid growth but in our judgment undesirable. Harbors worms, caterpillars and other insects. Not recommended for either lawn or street planting. 60-75' ABC.

—**NIGRUM. (Black or Rock Maple).**

More open in growth than Sugar Maple, permitting better growth of grass. Dull green. 100-120' ABC.

—**PLATANOIDES. (Norway Maple).**

A round headed Hard Maple which is of comparative rapid growth. Excellent street tree if headed high enough. Good where formal effect is desired. The leaves remain on the trees (green) three weeks longer than other Maples. 75-100' ABC.

—**var. Schwedleri. (Red-leaved Maple).**

Much like its parent the Norway Maple, except that all new leaves are bright, purplish red, changing later to dull green. Good for color contrast if not overplanted, its gleaming red and purple contrasting brightly with the green of surrounding trees. 50-60' ABC.

—**SACCHARUM. (Hard or Sugar Maple).**

Known everywhere because of its fine form and foliage which changes in fall to shades of yellow and bronze. Very slow growth. 100-120' ABC.

—**TARTARICA GINNALI. (See Dwarf Flowering Trees.)**

BUCKEYE

AESCULUS—Conspicuous flowers and unique texture effect of leaves are among its good points. Leaves out earliest in the spring—purest yellow in fall. Clutters up the lawn with falling flowers and seed capsules. Plant preferably in moist soils.

—**GLABRA. (Ohio Buckeye).**

Small, round-headed tree well adapted to middle-west planting. 25-40' ABC.

—**HIPPOCASTANUM. (Horse Chestnut).**

Difficult to transplant. Leaves subject to sun scald. Not so satisfactory as above species. 30-40'.

TREE OF HEAVEN

AILANTHUS—Half hardy and sub-tropical in effect. Remarkably fast in growth and withstands the smoke of the city well.

—**GLANDULOSA. (Tree of Heaven).**

Male flowers give off unpleasant odor. 40-60' C.

BIRCH

BETULA—Very ornamental trees of graceful habit, with slender, more or less pendulous branches. The delicate tracery of brown twigs and white branches in winter are in remarkable contrast with evergreens. A very clean tree. Prefers moist situation. Use extreme care in transplanting.

—**ALBA. (European White Birch).**

Strong growing, with dense, rather spreading habit. Very desirable for ordinary planting. 40-60' ABC.

—**var. laciniata pendula. (Cut-leaved Weeping Birch).**

Erect, with long, drooping branches and very finely cut foliage. One of the most graceful trees for ornamental lawn planting. Best to transplant in fall. 40-60' ABC.

—**LUTEA. (Yellow Birch).**

Silvery grey or light orange bark. Rather shaggy. Not recommended for the lawn. 60-80' ABC.

—**PAPYRIFERA. (Canoe or Paper Birch).**

Similar to European White Birch with more open, unconfined growth. Plant in clumps. 60-75' ABC.

—**POPULIFOLIA. (Quaking Aspen).**

Rustling, poplar-like leaves. Does better in dry soil. 30-40' ABC.

CHESTNUT

CASTANEA—Extremely difficult to grow in the middle west, being subject to both summer and winter injury. Succeeds in a few isolated spots. Not recommended generally.

—**DENTATA. (American Sweet Chestnut).**

Attractive in form, bark and foliage. Where it succeeds, it generally bears some fruit. 60-80' C.

CATALPA

CATALPA—Cultivated for handsome flowers and heavy, dense, if somewhat coarse foliage. Very rapid and upright growth. One of the latest trees to put forth its leaves in spring. Not hardy north.

—**SPECIOSA. (Western Catalpa).**

Best and hardiest of the type. Old flowers and seed pods objectionable for lawn and street planting. Best used for timber and posts; the wood possessing a fine grain and great durability. Recommended north only when planted with Ash, Maple, Poplar, etc. for protection. 75-100' AB.

—**BUNGEI. (Umbrella Catalpa).**

A dwarf, bushy form, grafted six feet high on hardy stems. Makes a uniform, spreading, umbrella-shaped head without pruning. Plant only for very formal effects. A.

HACKBERRY

CELTIS—Very similar to Elm but more stiff and upright. Not desirable near the house. Will withstand most adverse conditions.

—**OCCIDENTALIS. (Nettle Tree).**

Fairly rapid growth. Light green leaves. Horizontal spreading branches. 100-120' ABC.

OLIVE

ELEAGNUS—Excellent foliage of distinctive shades and colorings. Absolutely hardy. Use at a distance in connection with darker greens.

—**ANGUSTIFOLIA. (Russian Olive).**

Decorative, elongated fruits. Leaves light green above, silvery grey beneath. Bark threaded, like the true olive. 20-30' ABC.

ASH

FRAXINUS—Plant more Ash, for this is a fine street and park tree that is too little appreciated. Medium hardwood trees of rapid growth and open habit, permitting good sod underneath the trees. Don't overlook this tree in your haste for Hard Maples.

—**AMERICANA. (American White Ash).**

Very hardy, rugged and easily transplanted. When planted in moist soil the foliage turns deep bronze in fall, while on higher ground it imparts a clear yellow. 100-120' ABC.

—**PENNSYLVANICA. (Red Ash).**

Similar to above but smaller. 50-60' ABC.

—**VIRIDIS. (Green Ash).**

Similar to White Ash. Our native timber Ash. 100-120' ABC.

HONEY LOCUST

GLEDITSIA—Trees of very open, handsome habit and finely divided foliage. Not desirable except for large hedges and screens. Winter bark brown and olive while twigs shine as if polished.

—**TRIACANTHOS. (Honey Locust).**

Armed, or not, with large, three pronged thorns. Not recommended for low hedge because, when clipped, sprouts badly. 60-100' ABC.

COFFEE TREE

GYMNOCLADUS—Bold, upright and rugged in appearance, these trees are used mostly in park planting, where they stand out prominently.

—**DIOICA. (Kentucky Coffee Tree).**

Open headed, with large compound leaves. 75-100' ABC.

WALNUT

JUGLANS—Dual purpose trees associated with the happiest days of childhood. The shade is open and habit pleasing. Difficult to transplant when more than six or eight feet in height. Grow best in rich soil. Entirely hardy.

—**CINEREA**. (Butternut).

Prized chiefly for its wholesome, highly palatable fruit. 75-100' ABC.

—**NIGRA**. (Black Walnut).

Most valuable timber tree. The past few years have made terrible inroads on the supply of Black Walnut and those who have a small space can well afford to plant a Walnut grove. 75-100' ABC

—**SIEBOLDIANA**. (Japanese Walnut).

Similar to English Walnut but much hardier. Highest quality of all hardy nuts for this region. 60-75' ABC.

LARCH

LARIX—Deciduous trees, similar in form and summer foliage to the Spruces. Their greatest charm lie in the fresh, misty, mysterious effect of the early leaves and purplish flowers. Should be transplanted only in the fall.

—**EUROPEA**. (European Larch).

Pyramidal in growth. Sunny, well drained soil. 75-100' ABC.

SWEET GUM

LIQUIDAMBER—Trees of value for moist situations. Leaves star-shaped and lustrous, taking on most brilliant coloring in fall. Unique, corky branches.

—**STYRACIFLUA**. (Sweet Gum).

Brilliant crimson in fall. Symmetrical pyramidal habit. Not hardy north. 60-100' A.

TULIP TREE

LIRIODENDRON—Ornamental trees with heavy, handsome foliage.

—**TULIPIFERA**. (Tulip Tree).

Bluish tinge to leaf. Large flowers, yellow-green, marked with orange. Hardy only in Zone A. 75-100'.

MAGNOLIA

MAGNOLIA—Highly ornamental trees or shrubs, usually planted as single specimens in the lawn. Very difficult to transplant.

—**ACUMINATA**. (Cucumber Tree).

Greenish, yellow flowers and heavy soft green foliage. Regular in growth. 60-75' AB.

MULBERRY

MORUS—Small, fruit bearing tree used a great deal for windbreaks. Will attract birds. Ornamental value not considerable.

—**ALBA TARTARICA.** (Russian Mulberry).

Low growing and bushy. 30-50' AB.

—**var. pendula.** (Tea's Weeping Mulberry).

Long, slender branches drooping to the ground. It's use is always in bad taste unless pretty well hidden by other plants. Use in out-of-way corners. 20' AB.

SOUR GUM

NYSSA—Bold and picturesque trees for moist places. The foliage is clean cut and of a good, lustrous green, turning a flame scarlet in fall. Winter aspect very distinct if planted where the wind can shape it.

—**SYLVATICA.** (Tupelo).

Slender, pendulous branches. 75-100' A.

PLANE TREE

PLATANUS—Largely used for street and park planting. Habit, stiff, lofty, wide-spreading. Bark grey-green, peeling off in thin sheets. Prune rather severely. Deep, rich soil best; will stand wet ground. Foliage is large and coarse; coming out late in spring and dropping early in fall; sometimes attacked during summer by fungus that browns the leaves badly.

—**OCCIDENTALIS.** (American Sycamore).

Regular and Symmetrical. 100-125' ABC.

—**ORIENTALIS.** (European Sycamore).

Not hardy and not recommended.

POPLAR

POPULUS—Soft wooded trees of very rapid growth and varied excellence, some being quite meritorious while others are undesirable. All species are brittle; some cover the ground with seed pods and other species sprout badly. For a cheap, temporary tree they are unexcelled, but the fault lies always in overplanting. Don't characterize your place with cottonwood, don't cheapen its entire aspect by planting heavily with an inferior tree. Place them far enough apart so as to interplant permanent trees such as ash, elm and maple—the idea being to cut out the poplar when the other trees have attained good size. Many people like the cheerful restfulness of the leaves in slight air movement and love to lie beneath its light shade as they would a maple.

—**ALBA.** (White or Silver Poplar).

A large, broad headed tree with whitish bark and leaves, not good in smoke or dirt of cities. Sprouts badly. Use only in large plantings. 75-100' ABC.

—**var. Bolleana.** (Bolle's Poplar).

Much like Lombardy in narrow, upright growth. Leaves gracefully cut, light green above and clear white beneath. Very attractive olive-green bark. Plant for bold effects. Sometimes attacked by borers. 60-75' ABC.

—**BALSAMIFERA. (Balsam).**

Tall and upright growing. Appears to best advantage when planted among other trees. 50-75' ABC.

—**DELTOIDES. (Carolina Poplar).**

The quickest growing shade tree in the middle-west and therefore the most popular. Young established trees often grow 12 to 15 feet in a single season. The tree is absolutely sterile, never producing the seed pods which make the well known Cottonwood so objectionable. Grows in any soil. 75-100' ABC.

—**var. monolifera. (Cottonwood).**

Dropping seed pods make this tree very undesirable. 75-100' ABC.

—**NIGRA ITALICA. (Lombardy Poplar).**

One of the most striking and picturesque of trees. The limbs follow the trunk up almost vertically. Should always be planted to show up out of a shrubby clump or in connection with some architectural feature. Somewhat tender and short-lived. 50-75' A.

WILD CHERRY

PRUNUS—Semi-wild types of shade trees of use in the more remote plantings. The bloom in spring is quite showy but of short display.

—**PENNSYLVANICA. (Pin Cherry).**

Snow white flowers and red branches. 25-40' ABC.

—**SEROTINA. (Rum Cherry or Choke Cherry).**

Straight, columnar trunk with dark brown bark. Fruit the size of a pea, blue-black. 60-100' ABC.

—**PADUS MACKII. (European Bird Cherry or May Day Tree).**

Low spreading, round headed tree. Attractive dark green foliage; greenish white flowers in long drooping racemes. May. 25-40' ABC.

OAK

QUERCUS—Trees, each with an individuality of its own. Surely, there is nothing in nature quite so awe-inspiring, so thoroughly substantial and indicative of ages past and those to come. Tall, massive, stately; their wide, spreading limbs bear the stamp of nobility and the majesty of the world of trees. At present we have them everywhere but do we appreciate them? Do we realize that in time, even they will be gone and other generations the poorer? Old age will find our young people without this great natural endowment and they will not bless us for the loss. Let us by all means plant a few oaks. We are trying to do our part by growing in nursery, twice transplanted oaks with tap root discouraged and lateral (fibrous) roots highly developed. Such oaks stand transplanting well. Let us preserve for posterity and for our own declining years, one of the greatest tree comforts to be had.

—**ALBA. (White Oak).**

The noblest tree of the forest without a doubt. Tall, wide-spreading and open. Foliage excellent, turning delicate shades of red, violet and purple. The unfolding leaves in spring, carry with them a study in color and texture duplicated nowhere, in either nature or art. Give the White Oak plenty of room for it develops into a very large tree. 100-150' ABC.

—COCCINEA. (Scarlet Oak).

A tree of open growth and rounding head. Leaves very deeply divided. Fall coloring most brilliant. Likes a well drained soil. 75-100' ABC.

—IMBRICARIA. (Shingle Oak).

Branches slender and somewhat pendulous. Willow-like leaves which turn a delightful russett red in fall. 60-100' AB.

—MACROCARPA. (Burr Oak or Mossy Cup).

Excelled only by the Pin Oak in ability to withstand transplanting. Adapted to various soils and locations. Makes a very large, open-topped tree. Good fall coloring and moss-fringed acorns. 75-100' ABC.

—PALUSTRIS. (Pin Oak).

Pyramidal in habit with stiff, horizontal branches in irregular whorls. Best of all for transplanting and ability to adapt itself to a great variety of soils and location. Grows faster than any other Oak. Leaves deep green, glossy, fully divided; turning to handsome orange-scarlet in fall. Highly recommended for general planting. 75-100' ABC.

—PRINUS. (Chestnut Oak).

A large tree with irregular head and chestnut leaves. 75-100' AB.

—ROBUR. (English Oak).

A very large, stout, spreading tree. Acorns on long stems and clustered. Flower catkins give pleasing effect. 100-120' ABC.

—RUBRA. (Red Oak).

Wide spreading branches. First of oaks to bloom. Bronze and red in fall. 75-100' ABC.

BLACK LOCUST

ROBINIA—Trees with light, feathery, graceful foliage. Bark reddish brown. Attacked badly by borers after which it sprouts badly.

—PSEUDACACIA. (Black Locust).

Planted frequently but not recommended by us. 60-90'.

GINKGO

SALISBURIA—The sacred tree of China. One of the most peculiar in habit and leaf formation we have. Planted usually as a curiosity as it has no real value or function otherwise. Not entirely hardy.

—ADIANTIFOLIA. (Maiden Hair Tree).

Upright, pyramidal. 30-50' A.

WILLOW

SALIX—Trees and shrubby trees of exceedingly fine texture and lively effects. In growth very aggressive; difficult to eradicate rather than to establish. As a class they are quite uniform as to foliage, habit and cultural requirements. Almost without exception they require damp or entirely wet situations and heavy pruning the first few years. Useful to hold banks against erosion. Interesting shades of yellow found in leaf and bark.

—ALBA. (White Willow).

One of the largest, with silken, ash colored leaves. 40-50' ABC.

—BABYLONICA. (Weeping Willow).

Hanging streamers of olive green or purplish slender branches. Used best near moving water. 30-40' A.

—DOLOROSA. (Wisconsin Weeping Willow).

Hardest, coarsest and most spreading of the weeping types. 30-40' ABC.

—ELEGANTISSIMA. (Thurlow's Weeping Willow).

A harder form of Babylonica with bark of yellowish green spotted with purple. The best Weeping Willow. 30-40' ABC.

—PENTANDRA. (Laurel Willow).

Usually shrubby in habit with chestnut-brown bark. Its deep, lustrous green foliage makes a wonderful contrast when planted with other willows. 30-40' ABC.

—INCANA. (Silver Willow).

Small round topped tree; with long, slender branches; long, narrow leaves, olive-green above, white-tomentose beneath. 15-20' AB.

—VITELLINA AUREA. (Yellow Osier).

Long, hanging (not weeping) branches of brilliant yellow, especially in spring, before the leaves appear. One of the best for refinement. 20-30' ABC.

MOUNTAIN ASH

SORBUS—Large clumps of brilliant scarlet, orange or yellow berries, and colored foliage in fall endow the Mountain Ash with ornamental character second to no class of trees. In habit they are very formal, with richly toned bark in shades of green. Don't plant in rich soil. Liable to sun-scald and somewhat difficult to establish.

—AUCUPARIA. (European Mountain Ash).

Bright red berries and large white clusters of flowers. 30-40' ABC.

—var. pendula. (Weeping Mountain Ash).

A freak without merit or taste. Have discontinued growing them and will supply only under protest. 10-12'

—QUERCIFOLIA. (Oak-leaved Mountain Ash).

Very dense, erect, rounding heads and oak-like leaves. 30-40' ABC.

LINDEN

TILIA—Trees of comparatively rapid growth and regular form. All are hardy and not too exacting regarding soil, so long as it is not excessively dry. Characterized by heart-shaped leaves, fragrant flowers and winged fruits. Fine bee pasturage.

—AMERICANA. (Basswood).

Leaves light green beneath; dark above. Wide growing. A handsome lawn tree. 100-120' ABC.

—EUROPEA. (European Linden or Lime Tree).

A smaller tree, fine for street planting, more upright and pyramidal than Basswood. 75-90' ABC.

—PLAYPHYLOS. (Large leaved Lime).

Large, yellowing green leaves falling early in fall. Susceptible to dry weather. 100-120' ABC.

ELM

ULMUS—Tall trees with many distinctive characteristic forms of growth. Its uses for shade and street tree planting rank first and the beauty and grace of its wide spreading drooping limbs need no description. Immense, pillaring trunks, often feathered with small branches, give a majestic dignity which places the tree in a class almost by itself. The foliage is more open than dense, permitting a good stand of grass beneath. Frequently, however, the tree roots near the surface to the detriment of the lawn. Certain varieties are subject to insects and diseases and should be watched closely and reported to us promptly for remedy.

—**AMERICANA.** (American or White Elm).

The most beautiful as well as the commonest form found throughout the country. Subject to attack of Elm scale. 100-120' ABC.

—**GLABRA.** (Wych or Scotch Elm).

A tree more for service than beauty. A very satisfactory tree where a certain amount of refinement can be dispensed with. 80-100' ABC.

—**var. Camperdownii.** (Camperdown Weeping Elm).

Branches and branchlets pendulous, forming a round head. The hardiest and most reliable headed tree. 12-15' ABC.

—**CAMPESTRIS.** (English Elm).

Similar to Americana Elm but holds leaves longer in the fall. 100-150' ABC.

—**PUMILLA.** (Chinese Elm).

Very dense in habit with small, shapely leaves. Excellent for hot, dry soil and climate. Fine for screens. 25-50' ABC.

—**RACEMOSA (Thomasii).** (Cork Elm).

Interesting cork ridged branched in winter. 75-100' ABC.

—**WHEATLEYI.** (Jersey Elm).

A narrow, ascending, pyramidal tree, giving a dominant note in the landscape. Not thoroughly tested here for hardiness. 40-60'.

Dwarf Flowering Trees

The group here represented, mostly grow in dwarf tree form and are classified separately for the convenience of our customers. They represent a very valuable addition to our shrub list; are planted largely as single specimens although their real home is in the background of the border and in the shrubbery clumps.

Please note that following the description of varieties, we have given the season of bloom, the ultimate height growth; also the degree of hardiness as shown by the zone areas.

MAPLE

ACER. TARTARICA GINNALI—A dwarf, shrubby tree with handsome, finely cut leaves which develop excellent fall coloring. Good for grouping, or planted singly on small lawns or in angles. Attractive clusters of winged seed pods. 15' ABC.

JUNEBERRY

AMELANCHIER—Ornamental large shrubs or small trees native to the prairie timbers. Their delicate, drooping racemes of pure white flowers, coming before all else in spring, should not be overlooked in our more unconventional borders.

—**BOTRYAPIUM. (Dwarf Juneberry).**

More or less compact growth. April-May. 6-8' ABC.

—**CANADENSIS. (Shad Bush).**

A loose, open, small tree. May. 15-30' ABC.

RED BUD

CERCIS—Every border or shrub group, with its many early white flowering varieties, can be made doubly attractive in April and May by the proper use of the Red Bud. A small tree of round, regular habit and heart-shaped, shining-green foliage.

—**CANADENSIS. (Judas Tree or Red Bud).**

Wonderful profusion of bright, rose-colored flowers entirely covering the tree before the leaves appear. April-May. 15-20' AB.

WHITE FRINGE

CHIONANTHUS—Very desirable large growing shrub or small tree with ornamental purple fruit and deep, lustrous green foliage. Plant in sheltered positions as it is not entirely hardy till well established.

—**VIRGINICA. (White Fringe).**

Great drooping panicles of fringe-like white flowers in May. 8-10' A.

DOGWOOD

CORNUS—Most of the dogwoods are properly classified with the flowering shrubs. The following two should be used only in the tall borders or with other dwarf trees.

—**MASCULA. (Cornelian Cherry).**

Distinguished in very early spring by its dense clusters of small yellow flowers. Glossy leaves. Scarlet fruit in fall. March-April. 15-25' ABC.

—**FLORIDUS. (Flowering Dogwood).**

Small tree with large white or pinkish flowers. Very attractive but not hardy except in southern portion of Zone A. 10-25'

FLOWERING THORN

CRATAEGUS—The red haw, as a race, is shrubby, undersized, and with irregular or whorled branches set heavily with thorns.

Their great and varied charm lies in their spring bloom, handsome foliage, ornamental fruits, intense fall coloring and the wild, picturesque winter aspect; giving as a whole, one of the most complete and satisfactory class of materials available for planting. They re-plant more easily when small; are adapted to the heaviest clay and occasionally are found in extremely open, sandy soil. In the event of the latter conditions, enrich with manure.

They are absolutely hardy and rugged and may be placed in the most exposed situations. Use care in placing, that a good view may not be obstructed, and whenever possible, plant in connection with the shrubbery border. Most species may be trimmed and sheared with excellent results, showing great possibilities in formal hedging.

—**COCCINEA. (Scarlet Haw).**

Young foliage tinged red, scarlet and orange in fall. Crimson fruits with dark spots. May. 15-20' ABC.

—**CORDATA. (Washington Thorn).**

One of the finest. Scarlet, berry-like fruits in clusters persist till late in winter. May-June. 20-30' ABC.

—**CRUS-GALLI. (Cockspur Thorn).**

Distinctly horizontal rigid branches; handsome lustrous foliage. Fruit hangs on all winter. Used for hedges. June. 10-20' ABC.

—**MOLLIS. (White Thorn).**

One of the largest of the thorns. Conspicuous white branches throughout the winter. April-May. 40' ABC.

—**OXYCANTHA. (English May Tree).**

Shrub or small tree. Bushy habit. Pure white flowers. May. 15' ABC.

—**—var. alba plena.**

Similar to above, with double white flowers. 15' ABC.

—**—var. Paulii.**

Double, bright scarlet flowers. Most showy of all. May. 15' ABC.

FLOWERING APPLE

MALUS. (Pyrus)—What more pleasing to the sense of sight and smell, during the early days of May, than the clusters of wild crab apple trees in bloom along the creeks or skirting the edge of the timber? Even the wild types are worthy of a place in the border, or in the background of the shrubbery clumps, while the improved varieties offer the best material among all flowering trees.

They are adapted to a variety of soils; absolutely hardy; some species admirably adapted to single specimen planting on small places.

—**ATROSANGUINEA. (Crimson Crab).**

Dark red, single flowers, in great abundance and very showy. Fruit small, bright red in autumn. May, 15-20' ABC.

—**CORONARIUS. (Wild Crab).**

Our native wild crab, bearing a profusion of single pink flowers about the middle of May. Unattractive green fruit. 20' ABC.

—FLORIBUNDA. (Flowering Crab).

Rose-red, single flowers followed by small red fruit. May. 15-20' ABC.

—IOENSIS BECHTELI. (Bechtel's Flowering Crab).

Tree of medium size; covered in early May with large semi-double, fragrant flowers of delicate pink. Blooms when quite young. 15' ABC.

—PARKMANII. (Parkman's Flowering Crab).

A lovely little tree, especially in May, when covered with bright, rosy-pink flowers, in clusters, on long stems. Shiny, green leaves. Small dark fruit. 20' ABC.

—SCHEIDECKERII.

Beautiful pink or white flowers; sweet scented; double; of good size. May. 12-15' ABC.

Deciduous Shrubs

The shrub planting about the lawn serves a double purpose. It offers flowers in all manner of shapes and shades and colors. At the same time it defines the boundaries and carries the foliage line of the trees to the ground in long, sweeping curves.

One becomes more intimate when he plants about the house. There the sorts exhibiting refinement and more delicate character are in keeping. Except at the house corners or possibly about the entrance, confine your foundation planting to semi-dwarf and medium growing sorts, so that later, your desirable views from window or veranda are not obstructed.

The nicest flowering varieties and those of most pleasing form show to best advantage in the garden; about the entrance or near the walks. This leaves a wealth of the larger and more ordinary kinds for the border; the corners, and the background of the place; since their beauty is best appreciated when viewed from a distance.

The flowers may be had in many forms, and in going over the following pages, it will pay to make some attempt at following out a blooming scheme. In this way, there is no time of the season when there is absolutely no color to be had. Added flowers in the border or about the house are available in the form of perennials, planted in front of the shrubs, in bays and at promontories.

Remember always, never to clutter the lawn with trees and shrubs. **Always leave the main lawn area open.** Make all your shrubbery planting about the house foundation; along the border; at the entrances, and in the lawn corners.

Please note that following the description of varieties, we have given the season of bloom, the ultimate height growth, also the degree of hardiness as shown by the zone areas.

DWARF BUCKEYE

AESCULUS—Dwarf editions of the Horse Chestnuts, low and widely spreading. Use in border or isolated clumps in lawn. Not entirely reliable.

—**PAVA**—Red plumes in July. 1-3'
July. 1-3'.

—**PARVIFLORA**—Tall, irregular clusters of whitish flowers in July and August, 3-10'

FALSE INDIGO

AMORPHA—Plants of less desirable aspect, used to lighten up foliage effects or cover barren sterile slopes difficult to plant. Should be cut back frequently for best results. Dry or damp positions.

—**CANESCENS**. (Lead Plant).

Low and dense with paniced flowers of blue. Does best in dry protected positions. June-July. 1-3' A.

—**FRUTICOSA**. (Bastard Indigo).

Loose and open in growth. Violet-purple flowers with prominent yellow stamens. Prefers moist situations. June-July. 5-10' ABC.

FLOWERING ALMOND

AMYGDALIS—Low shrub, upright in growth and one of the most spectacular of early spring, marked by a great profusion of white or pink very double flowers. Use around the house or in the garden where they represent the highest degree of refinement and delicacy.

—**JAPONICA ROSEA PLENA**. (Pink Flowering Almond).

Bright rose-colored or blush balls of bloom on long stalks. May. 4-7' ABC.

—**JAPONICA ALBA PLENA**. (White Flowering Almond).

Same as above, but white. ABC.

ARALIA

ARALIA—Value lies entirely in foliage and subtropical effect. The arching branches and bright green foliage requires considerable room in border.

—**PENTAPHILLA**—No flowers. 5-10' A.

CHOKEBERRY

ARONIA—Native ornamental plants of value for any naturalistic planting. Of interest the year 'round—with blushed white bloom for spring and bright berries for fall and winter. Leaves turn brightest crimson. Prefer damp locations.

—**ARBUTIFOLIA**. (Red Chokeberry).

Showy red berries. April-May. 4-10' ABC.

—**MELANOCARPA**. (Black Chokeberry).

Blackberries. April-June. 3-6' ABC.

AZALIA

AZALIA—Properly classed as deciduous *Rhododendron*. Capable of most wonderful floral display, but can't be classed as a permanent investment in the middle west because of limestone soil and other conditions.

—**MOLLIS**—Shades of salmon-red to carmine. April-May. 2-5'.

—**VASEYI**—Most nearly satisfactory for this section of the country. Rose-colored with deep purple spots. April-May. 3-10'.

BARBERRY

BERBERIS—A large group of ornamental plants, all, with the following exception, ruled out of use as they are host to red rust of wheat.

—**THUNBERGII**—Invaluable for all-round planting purposes. With stands partial shade and considerable drought. The regular, horizontally spreading branches are abundantly covered with an extremely clean neat foliage which turns an excellent bronze in the fall. Flowers are of no importance, but masses of scarlet fruit persist all winter. One of the most satisfactory hedge plants. April-May. 3-6' AEC.

—**var. minor. (Box Barberry)**.—Dwarf and dense, suitable for tubs or window boxes. 6"-2'.

BUTTERFLY BUSH

BUDDLEIA—Half hardy plants of quick growth and attractive flowers. Best treated as perennials.

—**VARIABILIS. (Butterfly Bush)**.

Showy, fragrant, lilac-purple flowers. Late summer. 3-8' A.

—**var. veitchii**. More dense and robust. Mauve flowers with pink-eye. A.

SWEET-SCENTED SHRUB

CALYCANTHUS—A group known and admired for spicy fragrance of their leaves and peculiar attractiveness of the blood-brown flowers hidden away among the broad shining leaves. Succeeds in shade.

—**FLORIDUS. (Carolina Allspice)**.

Hardest of sweet-scented shrubs. May-June. 3-6' A.

SIBERIAN PEA TREE

CARAGANA—These plants are characterized by a clean-cutness and simplicity of effect that is appealing. A rather thin coating of foliage is offset by a remarkably interesting green bark with showy lenticels. Bright yellow pea-shaped flowers in spring. Plant in sun if possible.

—**ARBORESCENS. (Siberian Pea Tree)**;

Eventually makes a small tree. May-June. 10-20' ABC.

—**FRUTICOSA**—Shrub. 3-6'.

BLUE SPIREA

CARYOPTERIS—A semi-shrubby plant used in the north as a perennial. Its chief value lies in the lavender-blue bloom which appears in the axils of the leaves late in summer. Demands a well-drained soil and sunny position. Should be used in the front rank of the shrubbery border or as a perennial.

—**INCANA.** (*mastacanthus*).

August-November. 1-3' AB.

JERSEY TEA

CEANOTHUS—Typifies extreme delicacy with its slender twigs and finely panicked flowers. The shrub is low, erect to somewhat spreading, and carries with it a suggestion of the dry woodlands from which it comes. Give a light, open, well-drained soil and partial if not total shade.

—**AMERICANA.** (*Jersey Tea*).

Flowers white and of the consistency of foam. May-June. 1-3' ABC.

BUTTONBUSH

CEPHALANTHUS—In all essentials a marsh shrub; may be planted in standing water. It has a good foliage and attractive white flowers in compact globular heads which become the button ball of late summer. Don't plant in prominent places as the leaves appear extremely late. Most any moist soil will do.

—**OCCIDENTALIS.** (*Button Bush*).

Handsome glossy leaves. July. 3-10' ABC.

PEPPER BUSH

CLETHRA—Charming and attractive—this shrub appeals through its simple habit and fragrant blossoms. Adapted to semi-shady or low places and a peaty, somewhat open soil.

—**ALNIFOLIA.** (*Sweet Pepper Bush*).

White flowers in racemes. July-Sept. 3 to 6 ft. ABC.

—**var. rosen.** Pinkish-rose flowers.

COLUTIA

COLUTIA—Ornamental and free-flowering plants of rapid growth. Use only in large quantity in out-of-way places.

—**ARBORESCENS.** (*Bladder Cenna*).

Yellow, pea-like flowers. June-September. 5-12' ABC.

DOGWOOD

CORNUS—The cornals are not notable for spectacular bloom; but because of a tough hardiness, strong-growing qualities and bright-colored bark and berries, they have won a place and estimation that will not be supplanted or lost. In nature we find them in the edges of woodlands and in the fence corners, filling out and completing the larger growth of trees

in one case and the smaller perennial effects in the other. It is in this way they should be adapted for ornamental planting. Shrubbery borders in connection with trees and screens of all kinds are hardly complete without a generous use of the engaging individuals of this family. Many interesting and unusual combinations and contrasts may be worked out with the many different forms and colors. The greenery of the foliage is always varied and complete and affords softly diluted shades of autumn colors. They may be exposed in any manner, will thrive in shade, and grow in 'most any soil. Generous pruning of the Dogwoods induces a more dense habit and consequently more new colorful wood for snow contrast.

—**ALBA SIBERICA.** (Siberian Dogwood).

Blood-red branches. Grows in great tangled masses when mature. Flowers yellowish-white; fruit pearly-white. May-June. 5-8' ABC.

—**var. Spaethii**—Leaves edged with yellow. Use sparingly. 3-6' ABC.

—**ALTERNIFOLIA**—Shrub with foliage arranged in distinct tiers. Bright blue berries. June. 8-25' ABC.

CIRCINATA.

Bark green to purple. Berries light blue or greenish-white. 3-8'.

—**FLORIDUS.** (Flowering Dogwood).

(See "Dwarf Flowering Trees.")

—**MAS (MASCULA).** (Cornelian Cherry).

(See "Dwarf Flowering Trees.")

—**RACEMOSA (PANICULATA).** (Grey Dogwood).

Grey branches and an abundance of white flowers in May and June. 5-10' ABC.

—**SANGUINEA.** (European Red Osier).

Upright growth with greenish-purple stems. May-June 6-12' ABC.

—**SERECIA (AMOMUM).** (Silky Dogwood).

Ordinarily more dwarf and refined than other Cornels. Purple branches.. blue fruit. 3-8' ABC.

—**STOLONIFERA.** (Native Red Osier).

Spreading stems of scarlet. White fruit. Prefers wet ground. 6-10' ABC.

—**var. flaviramea aurea.** (Golden Barked Osier).

Yellow branches; flowers white. ABC.

HAZEL

CORYLUS—The Hazels are ornamental with utilitarian value; the drooping catkins of spring, vigorous summer foliage and the nuts in the fall afford an all-round service that one seldom finds. Quite difficult to establish.

—**AMERICANA.** (Hazelnut).

Upright growth. 3-8' ABC.

—**AVELLANA.** (Filbert).

Long streaming catkins of brown and gold. 5-15' ABC.

COTONEASTER

COTONEASTER—A new plant for the middle west with decorative fruits and brilliantly colored autumn foliage. The future hedge for the north.

—**ACUTIFOLIA**—Slender spreading branches and jet black fruit in September and October. 8-10' ABC.

JAPAN QUINCE

CYDONIA—The dwarf quince has long been a favorite in gardens, with clustered flowers of rose and crimson peering out from the mass of shining, glossy leaves or early, before the leaves. Appears to best advantage with a good background of evergreens, and in company, possibly, with Forsythia, or some such early bloomer. They are not so particular with reference to soil as they are to a sunny, protected location.

—**JAPONICA. (Japan Quince).**

Rose crimson flowers, variable. March-April. 3-5' A.

—**var. umbellicata,**

Rose-red flowers and yellow fruits. April. 3-5' ABC.

—**MAULEI. (Dwarf Japan Quince).**

Orange-scarlet flowers. March-April. 1-3' A.

DEUTZIA

DEUTZIA—Too bad this family of refined ornamental shrubs are not hardier here. Except gracilis, they are not to be recommended save in Zone A, and then not always satisfactory on account of shy-blooming qualities due to severe winters and heavy soil. Plant only in protected locations.

—**GRACILIS. (Dwarf Deutzia).**

Low and compact with slender drooping branches. Hardest of the Deutzias and desirable on account of dwarf habit. White flowers in racemes. May-June. 1-3' ABC.

—**var. rosea.** Larger growing than type; pink flowers. 3-5' A.

—**LEMOINEI**—Spreading and vigorous in growth. June. 2-4' A.

—**SCABRA**—Upright growth. Vigorous. Flowers bell-shaped. June-July. 6' A.

—**var. pride of Rochester,**

Large double white, flushed with pink. A.

WEIGELIA

DIERVILLA—Weigelia has a significance, a meaning to most lovers of flowers that is fundamental and powerful. It stands for that which the old-fashioned flower garden does—the haunting memories and sympathies of our forebears. It is of a spreading habit with arching stems covered with large coarse leaves. The elongated bell-shaped bloom comes in shades from white to rose and deepest carmine. Plant in any ordinary garden soil, preferably in a protected spot as it is not completely hardy. Covers an unusually long blooming period.

—**FLORIDA. (Weigelia rosea)**—Very free flowering. Shades of light and dark rose. May-June. 4-6' A.

—**CANDIDA**—Flowers pure white. A.

—**EVA RATHKE**—Flowers deepest carmine-crimson with prominent yellow stamens. AB.

OLEASTER

ELEAGANUS—When it comes to foliage, the Oleasters are in a class by themselves, and their singularity is in no way repellent or incongruous as is so often true. It is in all cases unobtrusive and quiet, and works in wonderfully well for contrast in the greenery of the border. The flower is never very prominent but adds a pleasing fragrance, while the fruits are in every instance ornamental. They do well in ordinary well drained soil and prefer a sunny location.

—**ANGUSTIFOLIA.** (*Russian Olive*).

Shrub or small tree with silvery grey foliage, small yellow flowers and yellowish-brown fruits with silver scales. June. 10-30' ABC.

—**ARGENTEA.** (*Silver Thorn*).

Silvery foliage and reddish twigs. May-June. 6-10'.

—**LONGIPES.** (*Japanese Oleaster*).

Low and more spreading, with gold-specked stems. Leaves a decided silver beneath, cream-colored above. Fruit scarlet. April-May. 4-6' ABC.

EVONYMUS

EVONYMUS—A group of shrubs and small trees that are of exceeding interest and considerable value in a landscape way. Unusually variable in form, they offer species either conventional or wholly informal, and range from vines to shrubs and fair-sized trees. The flowers as well as the fruits are displayed in shades of yellow, crimson and purple. Not exacting with regard to soil.

—**ALATUS.** (*Japanese Burning Bush*).

Peculiar winged, corky branches. Adapted for formal work by its regular growth. Use individually or where the border line needs preciseness. Bright crimson foliage in the fall. May-June. 5-8' ABC.

—**AMERICANUS.** (*Strawberry Bush*).

Symmetrical upright shrub. Pink fruits in the fall. June. 6-8' ABC.

—**ATRO-PURPUREA.** (*Burning Bush*).

Shrub or small tree. Use in prominent place in shrubbery border for high and permanent effects. June. 10-20' ABC.

—**EUROPEA.** (*European Spindle Tree*).

Best form but least hardy.

—**RADICANS.** (*Evergreen Evonymus*).

Low and spreading. Must be cut back heavily. 3-5' A.

—**var. vegetus.** (See "Vines").

PEARL BUSH

EXOCHORDA—The Pearl Bush is of open unattractive growth, but gives such a wealth of magnificent bloom that it is of exceptional value when properly located. Its place most decidedly is among other shrubs where its base is covered and where its foliage will receive the support of surrounding plants. They should be allowed a somewhat protected place in the sun, together with a well-drained loamy soil.

—**GRANDIFLORA**—Slender upright spreading shrub. Pure white flowers two inches across. April-May. 8-12' ABC.

GOLDEN BELL

FORSYTHIA—Harbingers of another spring which break out in a flash of clear pure yellow and cluster about the naked branches in golden sheaths, while winter has scarcely gone. They offer the first thrills of that impulse for gardening which exists as a basic part of our natures. The foliage is of a deep healthy green which continues late, turning bronze in the fall. It is, however, insufficient to give body to the bush. To mitigate this evil, plant among other species and keep age of the wood down by pruning. Entirely hardy when planted on clay soil. No recommended for rich black soil at all. Give a sheltered position where possible.

—**INTERMEDIA. (Golden Bell).**

Slender erect or arching branches. Use in shrubbery border. April. 6-10' AB.

—**SUSPENS A. (Trailing Golden Bell).**

Slender arching branches lopping over on the ground. Flowers striped orange within. Canes will grow as long as 15 feet. Useful for banks and walls. April. 6-8' AB.

—**var. Fortunei**—Vigorous upright growth, finally bending over. AB.

—**VIRIDISSIMA**—Greenish tinge to the flower. Less hardy and graceful. 8-10' AB.

WITCH HAZEL

HAMAMELIS—Fall and winter blooming ornamentals are at a premium. This habit is as curious and interesting as the flower itself, which appears just about the time the leaves are taking on tones of yellow and purple. The shrub is dense and compact and prefers a damp peaty or sandy soil. Don't cultivate, as the leaves tend to hang on and hide the bloom.

—**JAPONICA. (Japanese Witch Hazel).**

Yellow-orange flowers in January and March. Of questionable hardiness. 20-30'.

—**VIRGINIANA. (Native Witch Hazel).**

Masses of golden-yellow ribbon-like flowers and a good clean leafage. November. 10-25' ABC.

ALTHEA

HIBISCUS—A family of remarkable plants both herbaceous and shrubby, blooming at a time when there is little else. Success with these very wonderful plants, however, seems more or less localized. Quite tender when young, but tending to outgrow winter-killing with age. Prune heavily in March for bloom.

—**SYRIACUS. (Rose of Sharon).**

Large double or single flowers in richest shades of rose and purple or white. August-September. 6-10' A.

HYDRANGEA

HYDRANGEA—In late summer and fall the Hydrangea gives one of the most remarkable manifestations of mass effect to be found the year through. Its dense crowded panicles of white bloom sway like great plumes in the breeze, or rest heavily on the ground. Its boldness in the landscape is extravagance, while its free-flowering proclivities and absolute hardiness are everywhere recognized. Indeed, its showy characteristics are mainly responsible for its greatest fault—its improper use. Do not over do a planting of this, as its desirability lessens with the degree of use. Its habit of growth in all cases is loose and open, while some species are very ragged at the base. For best blooming cut out weakest stems in early spring and plant in moist, sunny locations. Shade allows better foliage but the flower is then of less consequence.

—**ARBORESCENS STERILIS.** (Hills of Snow).

A vigorous upright shrub with creamy-white flowers in flattish clusters. June-August. 4-6' ABC.

—**PANICULATA GRANDIFLORA**—

White flowers in globe-like heads tinged pink by first frosts. August-November. 3-6' ABC.

—**TREE FORMS.** Available. ABC.

—**QUERCIFOLIA.** (Oak-leaved Hydrangea).

Spreading shrub with large oak-like leaves giving a good fall coloring. July. 4-6'. AB.

HYPERICUM

HYPERICUM—Low growing, tender shrubs for the fore part of the border. Treat as perennials for they kill back occasionally, but renew from the roots.

—**AUREUM.** (St. John's Wort)—

Bright yellow flowers. July-August. 3' A

—**MOSERIANUM.** (Gold Flower).

Good green foliage on long recurving branches and golden flowers in July and August. 2' A.

HOLLY

ILEX—Deciduous spreading shrub good for wet lands. Bright berries last till mid-winter. Plant only in clumps, and in shade.

—**VERTICILLATA.** (Winterberry). Red Berries. Flowers in June-July. 4-6' AB.

CHORCHORUS

KERRIA—The Kerrias are essentially Japanese in habit and general appearance and carry an atmosphere of the Orient that is extremely valuable as a touch here and there in our landscape schemes. Use in forefront of border and more refined places about the house. Not entirely hardy, so allow a sheltered place. After freezing, it renews from the roots. Plant in fertile, well drained soil with some shade.

—**JAPONICA (Globe Flower).**

Rich yellow flowers with delicately cut leaves and bright green bark. June-July. 4-6' A.

—**var. flora plena**—Fluffy crinkled balls of yellow. A.

—**var. variegata**—Daintily variegated China-green and white, dwarf. A.

PRIVET

LIGUSTRUM—The privets are not limited to use as a hedge. A remarkable adaptability makes them of value for many places in the border and to cover steep sterile lands. They are quite handsome in bloom, while the blue-black clusters of berries are ornamental the early winter months. The foliage is very clear cut, clean, free from fungus and insect pests and withstands well the smoke and dust of the city. A planting withstands considerable shade and overcomes driest locations.

—**AMURENSE. (Russian or Amoor River Privet).**

The hardiest and most desirable for sheared hedges. June-July. 8-12' AB.

—**IBOTA. (Japanese Privet).**

Abundant drooping clusters of white flowers. Not very hardy. June-July. 5-8' A.

—**var. Regelianum. (Regel's Privet).**

Very fine. Low spreading horizontal branches makes best of low hedges. Gives most distinctive note in border. 3 to 5' ABC.

—**OVALIFOLIUM. (California Privet).**

Habit stiff. Glossy foliage. Hardy only in South portion of zone A. July 8-15'.

—**VULGARIS. (Common Privet).**

Tall, spreading shrub best adapted to shrubberies and natural plantings. For use under adverse conditions of soil and moisture. White flowers; Black fruit. June-July. 5-8' AB.

HONEYSUCKLE

LONICERA—The bush honeysuckles are redolent of the fragrance and brightness of balmy summer days. The flowers individually are of no importance, but in the aggregate are quite effective, and as viewed from a distance take the sun and from many angles reflect it in the tremulous, shimmering light that gives to the honeysuckle its intrinsic charm. The foliage is of a lush, cool consistency that satisfies and serves in the late fall as a setting for the many-clustered beads of red, white, or blue-black. The shrub is never coarse or weedy; has little dead wood and seldom requires pruning.

—**ALBERTI. (Siberian Honeysuckle).**

Graceful drooping branches. Flowers rosy-pink. Fragrant. 2-4' ABC.

—**BELLA ALBIDA. (Garden Honeysuckle).**

Upright and spreading. White flowers and red fruit in the months of June, July and August. 5-8' ABC.

—**var. chrysantha.**

Yellow flowers; reddish-purple foliage.

—**FRAGRANTISSIMA. (Fragrant Honeysuckle).**

Low and spreading. Leaves tinged with ochre. Flowers cream to yellow, with excessive fragrance. April-May. 3-6' ABC.

—**MORROWI. (Japanese Honeysuckle).**

Remarkably fine plant, with wide-spreading branches, densely laden with bright crimson berries in July. May-June. 4-6' ABC.

—**RUPRECHTIANA.**

Very refined and delicately formed branches. Dark grey-green foliage. 8-10' ABC.

—**TARTARICA. (Tatarian or Upright Honeysuckle).**

The type usually found. Absolutely hardy and vigorous. May-June. 8-19' ABC.

—**var. alba.**

More erect in growth, and larger white flowers. ABC.

—**var. grandiflora.**

Largest pink flowers. ABC.

—**var. rosea.**

Rose-colored flowers. ABC.

—**var. rubra.**

Bright red flowers. ABC.

MOCK ORANGE

PHILADELPHUS—The popular old-fashioned *Syringa* so long valued and loved as one of the most complete and satisfactory of our flowering shrubs. Its connection with the home has always been of the most intimate and its attachment to the lives of the people the closest. The pure white waxen flowers cover the bush like a mantle, while some species dispense a fragrance hard to equal. It should be placed in such a manner as to make the most of this fragrance and masses of white flowers. Prune out two to five canes each year.

—**CORONARIUS. (Mock Orange).**

Most free-flowering and fragrant. May-June. 8-10' ABC.

—**var. aureus. (Golden-leaf Syringa).**

Bright yellow foliage. Use in shade. May-June. 4' ABC.

—**var. nanus.**

Dwarf and compact. May-June. 3-4' ABC.

—**GRANDIFLORAS.**

Blooms later. Scentless. June-July. 6-10' ABC.

—**LEMOINEI. (Lemoine's Syringa).**

Excellent free-flowering shrub with regularly spreading branches. Many horticultural varieties. May-June. 5-7' ABC.

—**var. avalanche.**

As tall as 6'. May-June, ABC.

—**var. Gerbe de Nige.**

Dwarf in growth; fragrant white flowers. May-June. 4' ABC.

—**var. Mont Blanc.**

Profuse bloomer; fragrant. May-June. 5-6' ABC.

NINEBARK

PHYSOCARPUS—These plants are among the most fundamentally satisfactory of the materials available for general use. A vigorous, sometimes coarse growth combined with absolute hardiness, make it desirable for the less refined points of planting. A rather poor white flower gives way to exceptionally fine masses of crimson berries.

—**OPULAFOLIA. (Ninebark).**

Quick-growing, tall shrub, with erect to spreading branches. White flowers followed by bright red fruit. May-June. 8-10' ABC.

—**var. aurea. (Golden Spirea.)**

Showy yellow foliage, bronze in summer and fall; white flowers. May-June. 6-8' ABC.

POTENTILLA

POTENTILLA—Valued for persistency and hardiness. Will grow anywhere but prefers moist soil.

—**FRUTICOSA. (Shrubby Cinquefoil).**

Bright yellow flowers. June-July. 1-4' ABC.

PRUNUS

PRUNUS—Including the flowering plums, cherries and peaches. Several are worthy of more wide use.

—**PISSARDI. (Cherry-Plum).**

Rich purple-red leaves. Tender. 5-10' A.

—**STANAPA.**

Similar to preceding, but more hardy. ABC.

—**TRILOBA. (Flowering Plum).**

Clear pink flowers at time of leaving. Fine foliage. 6-8' ABC.

BUCKTHORN

RHAMNUS—Rough, tall plants; but with hardy rugged characters fitting them for the remote borders, backgrounds and wild or thicket plantings.

—**CATHARTICUS.**

Dull, grey-green foliage, inconspicuous flowers and black fruits. Used for hedges or shrubbery in connection with poor soil. 8-12' ABC.

—**FRANGULA. (Black Thorn).**

Shiny foliage and berries, and exhibiting some refinement. 8-10' ABC.

WHITE KERRIA

RHODOTYPOS—An extremely original plaited leaf, delicately and sharply serrate and giving a fine mass of light clear green which sets off to best advantage the daintily pleasing and refined flowers. Sometimes troubled by winter injury of terminal branches.

—**KERRIOIDES. (White Kerria).**

White flowers and shining seed pods of jet. May-June. 4-5' AB.

SUMACH

RHUS—The ornamental value of this native material has, until recently, never been appreciated. They are now included among the most desirable ornamentals and are fast gaining their due of popularity. It is one of the few things that may be used here for sub-tropical effects. The striking appearance of foliage and bright flowers is augmented in the fall by the most brilliant coloring of leaves and seed clusters. With age there is a tendency to a canopy-like growth to the detriment of the base, so where the more usual results are sought, the stems should be cut back or low plants used in between. Use in the more distant belt plantings and for sterile soil, steep banks, etc.

—**AROMATICA. (Fragrant Sumach).**

Flowers inconsiderate, but the fragrant foliage is excellent. May be used beneath taller, more loosely growing plants. May. 2-5' ABC.

—**COPALLINA. (Shining Sumach).**

Latest flowering species. Takes on wonderfully brilliant shades in fall. July-August. 4-25' ABC.

—**COTINUS. (Purple Fringe or Smoke Tree).**

Unique and beautiful, with a very fine bloom in purple-grey billows. Freezes back frequently but comes up again from the root. June. 6-12' A.

—**GLABRA. (Smooth Sumac).**

The native sumach of our side hills. Most brilliant coloring of foliage and seed clusters. July. 8-12' ABC.

—**var. laciniata. (Dwarf cut-leaf sumach).**

Leaves doubly compound. Reddish tinge imparted to the whole plant by veins. July. 3-5' ABC.

—**TYPHINA. (Staghorn Sumach).**

Excellent for heavy foliage effects in rear of border. Erect divided branches and flower clusters extremely picturesque. Good for driest soils. June-July. 15-25' ABC.

—**var. laciniata. (Fern-leaf Sumach).**

Foliage cut deeply and delicately as that of a fern. Very refined. 12-15' ABC.

FLOWERING CURRANT

RIBES—Hardy substantial plants that give their rich colors and odor of spices in early spring. The foliage is decidedly characteristic and pleasing while the plant withstands a vast deal of neglect and hard usage. They will thrive in partially shaded places and some varieties are adapted to driest banks where little else will grow. Don't plant near White Pine as several varieties are host to the White Pine Blister Rust.

—**Alpinum. (Mountain Currant).**

Dense and upright. Yellow bloom. Excellent for dry sterile soils, and underplanting. May. 3-5' ABC.

—**AUREUM. (Golden Currant).**

More open growth with glossy foliage. Especially fragrant. Fruits. May. 5-6' ABC.

—FLORIDUM. (Black Currant).

Greenish-white flowers and black fruits. Crimson and yellow in autumn. 3-5' ABC.

—GORDONIANUM.

A hardy English hybrid with light rose-purple flowers. May. 5-6' ABC.

—SANGUINEUM. (Red flowering Currant).

Purplish-scarlet flowers, followed by bluish-black fruits. May 5-6' ABC.

MOSS LOCUST

ROBINIA HISPIDA (Rose Acacia)—Rugged, tenacious plants with open habit of growth and peculiar bristly stems. Flower sweet-pea like, light rose in color. Use in out-of-the-way places on sterile soils, as they sprout badly from roots. May-Aug. 2 to 7 ft. ABC.

Roses

ROSA—Includes the most highly developed as well as the most primitive forms of ornamentals. As a group, widespread, reaching back in human association as far as literature can be traced. The popularity of the rose need not be mentioned, and so far as success in this part of the country is concerned we will say that the principal limiting factor is the "personal equation." Is your energy and attention equal to the desire for wonderful flowers? In the answer to this question rests the probability of success. If you have not the time to watch them every day and look after their many needs, plant peonies and perennials instead for they are hardier, take better care of themselves, and cover a far more complete blooming period. This advice of course applies to bush roses. Nothing will quite take the place of the hardy climbing roses.

Roses require an unusually rich, open soil. It must be kept so by working in plenty of compost and leaf mold. Occasional sand dressings are also necessary in heavy soils. The soil should be well drained; the plants cultivated each week from April till July 1st, then mulched heavily with straw or lawn clippings; they should be sprayed with lime-sulphur or Bordeaux for fungus and with lead-arsenate for slugs and caterpillars. All hybrid perpetual and hybrid tea roses require winter protection. The best and most practical way to protect your roses is to mound the earth twelve inches high about the plants just before the ground freezes in the fall. Then after the ground freezes, cover the bed with evergreen boughs, old branches, corn stalks, or any roughness, to shade the bed and catch the winter snows. When this is done even the highly prized hybrid teas will winter safely, but this work must be kept up every year.

WILD ROSES

or true species—all quite floriferous and vigorous growers in all soils and offer besides bright color in bark, hips and fall leaves. Never plant in rose gardens as they are suitable for border or wild planting only. Flowers always single.

—BLANDA. (Smooth Rose).

Red thornless stems and pink flowers in May and June. 3-5' ABC.

—**CAROLINA. (Swamp Rose).**

Large pink flowers in June and July. 2-4' A.

—**LUCIDA. (Pasture Rose).**

Red fruits and pink flowers in June and July. 3-6' ABC.

—**var. alba.**

Light green wood and white flowers.

—**NITIDA. Low and upright. June-July. 1-2' ABC.**

—**RUBRIFOLIA.**

Purplish branches and reddish foliage. Partial shade. June, 3-6' ABC.

—**RUBIGINOSA. (Sweet Briar).**

Dense; upright spreading. The bright green foliage has a very agreeable odor. June. 5-6' ABC.

—**RUGOSA. (Japanese Wild Rose).**

Fine dark green creased foliage and clusters of very large single flowers from May to September. Orange or scarlet hips sometimes an inch in diameter. 3-6' ABC.

—**var. alba. White flowers. Not so tall. 2-4' ABC.**

—**SETIGERA. (Prairie Rose).**

Shrub or vine with streamers sometimes 15' long. Very floriferous. Use to face shrubby border or on sterile banks. June-July. ABC.

—**WICHURIANA. (Memorial Rose).**

Tends to be evergreen. Prostrate trailing. Use to cover banks or rocks. June-July. AB.

JUNE ROSES

Old-fashioned roses, usually double and including many hybrids old and new. These roses can be used in informal rose gardens, but are perhaps better in the border as they need no particular care.

—**FOETIDA. (Austrian Briar).**

Yellow roses quite common and very floriferous. Odor not pleasant. 6-8' ABC.

—**var. Harrisonii. (Harrison's Yellow).**

Pale yellow; free bloomer and vigorous grower.

—**var. Persiana. (Persian Yellow).**

Deep yellow and very double.

—**GALLICA. (Moss Rose).**

Upright in growth. Attractive moss-covered buds. Very fragrant. 3-5' ABC.

—**var. Blanche Moreau. Best white moss.**

—**var. Crested Moss.**

Value lies in crested buds even more than bloom. Red and white.

—**var. Salet. (Light Rose). Large and full.**

—**RUBIGINOSA HYBRIDA. (Sweet Briar).**

Flowers large, single and in clusters. Developed in Ireland. ABC.

—**var. Gierstein. Dark crimson.**

—**var. Lady Penzance. Copper-yellow.**

—**var. Minna.**

—RUGOSA HYBRIDA.

Flowers large and flattish, semi-double. Very hardy and robust. ABC.

—**var. Conrad F. Meyer.** Deep silvery pink.

—**var. Mme. Villeminot,**

—**var. Gravereaux.**

—**var. Mme. Georges Bruant.** Pure White.

—**var. Delicata.** Light rose.

CLIMBING ROSES

Mainly hybrids of garden forms with the wild trailing species.

—MULTIFLORA HYBRIDS.

Not robust growers although hardy.

—**var. Crimson Rambler.** Long a favorite. Clusters of scarlet roses. 8-10' AB.

—**var. Flower of Fairfield.** A twice blooming Crimson Rambler. AB.

—**var. Seven Sisters.** Delicate crimson with white centers. ABC.

—**var. Yellow Rambler.** Yellowish. Tender. A.

—**var. White Rambler.** Pure white. A.

—**SETIGERA HYBRIDS.** Marked by strong root system of immense value for the hot summers of the middle west.

—**var. Prairie Queen.**

Very double; pink. Wonderfully productive. Hardy. ABC.

—**var. Baltimore Belle.** Double white. Tender. A.

—WICHURIANA HYBRIDS.

Characterized by excellent foliage and good growing qualities.

—**var. Dorothy Perkins.**

One of the best climbers. Shiny green leaves and shell-pink roses. AB.

—**var. Excelsa.**

Similar to Crimson Rambler but vastly more robust and hardy. ABC.

—**OTHER HYBRIDS.** Mostly climbing hybrid teas.

—CLIMBING AMERICAN BEAUTY.

A climbing variety of that well-known tea rose. A.

—**TAUSENDSCHOEN. (Thousand Beauties).**

White, delicately flushed rose or carmine. Profuse in bloom. AB.

—**VEILCHENBLAU. (Blue Rambler).**

Delicate shades of blue at first, later fading out. Not good. AB.

HYBRID TEA ROSES

Hybrid Tea Roses are truly the acme of perfection when it comes to flowers. Delicate shades of color vie with texture of petal in producing a floral offering for the gods. They are difficult to handle, but a little extra care by way of cultivation, feeding and mulch in summer, an extra blanket of leaves and litter in late fall, and you have in this class truly ever-blooming roses of the greenhouse standard of excellence. The following varieties have been adopted from a long list because of their ability to withstand our hot, dry summers without serious leaf injury. Porous, warm soil.

—AMERICAN BEAUTY.

The great greenhouse rose. When grown in the garden the bloom is not quite so large but fully as fragrant and handsome. Deep pink, shaded with carmine. A.

—GENERAL McARTHUR.

Dazzling crimson scarlet; unusual fragrance. One of the truly fine red roses for cutting and bedding. A.

—GRUSS AN TEPLITZ.

A rather small, rich velvety, crimson-red rose; the freest blooming of all roses except the Baby Rambler group. Almost constantly in bloom from May till frost, and one of the hardiest of the H. T. type. Every rose lover should have it. AB.

—K. A. VICTORIA.

The most handsome buds in the rose class. Elegant, large, pointed buds and very large, waxy, creamy-white flowers of delicious fragrance. By far the best white H. T. for this region. A.

—KILLARNEY.

Queen of the Irish roses. Bright, carmine-pink, marbled with creamy white; long buds and enduring bloom. Can also be furnished in pure white. A.

—LA FRANCE.

Delicate, silvery rose, changing to pink; very large, full, round and fragrant. A constant bloomer, unsurpassed for delicacy of color. Least hardy of all the H. T. roses in the list. A.

—MADAM CAROLINE TESTOUT.

Light, salmon-pink, edged with silvery rose. The most beautiful and desirable pink H. T. Seldom out of bloom. AB.

—RAYON D'OR.

Like La France, for delicacy of bloom it ranks first but also like La France it is generally a little too tender for ordinary garden culture. Copper-yellow; handsome; long, pointed bud; beautiful free yellow rose. A.

—SOLEIL D'OR.

An Austrian Tea Hybrid of highest rank. Very vigorous and hardy; free blooming; with handsome yellow flowers, splashed with red. By far the best yellow ever-blooming rose for the garden. Cut back the wood severely every year in March to get a profusion of bloom. ABC.

BABY RAMBLERS

Baby Ramblers—With the Teas must be included the Baby Ramblers, a race of dwarf ever-blooming roses of rare excellence. Ordinarily they will bloom continuously from May till frost, at which time they may be potted and left in the cellar to rest for a month. They will then brighten the house for the rest of the winter. Very hardy.

—MADAM CUTBUSH. Clear china-pink with shadings of rose. ABC.

—ERNA TERCHENDORF.

Vivid crimson. Large and very double flowers. ABC.

—CATHERINE ZEIMET.

Pure white with the freedom of bloom of the red varieties. ABC.

HYBRID PERPETUAL ROSES

Hybrid Perpetual Roses—Most of bloom in June with a few scattering out over the season. These are the varieties best adapted to our middle west conditions. Use only in gardens. Prefer a rich, heavy, well-drained soil. Best if reached by morning sun and shaded at noon. Cut the bloom early for fall blooming.

—ALFRED COLOMB.

Bright cherry-red, one of the good dark red sorts. AB.

—ANNE DE DIESBACH.

Brilliant rose color, very large broad flowers. AB.

—BARON DE BONSTETTIN.

Rich dark red; highly fragrant; very double. One of the very best dark red roses. AB.

—COQUETTE DES ALPS.

Small but highly fragrant; white, slightly shaded with pink; very profuse. More valued in the landscape than for cut flowers. AB.

—EARL OF DUFFERIN.

A fine dark rose with large, red, finely formed flowers. AB.

—F. K. DRUSCHKI. (Snow Queen).

By all odds the best hardy white rose. Very strong grower; profuse bloomer; large, waxy, pure white flowers, highly fragrant. Covers an unusually long blooming period. ABC.

—GENERAL JACQUEMINOT.

An old favorite among the bright red roses. Medium size; free bloomer, hardy and reliable. ABC.

—HUGH DICKSON.

One of the new crimson roses that we have recently added to our list on account of its large, perfectly shaped flowers; strong vigorous and prolific growth. AB.

—MAD. CHAS. WOOD.

An old favorite red rose; extra large; full and double; deep crimson. AB.

—MAGNA CHARTA.

Valued on account of its color; beautiful, bright pink; very large and fragrant; a free bloomer. AB.

—MADAM PLANTIER.

Not an H. P. rose though generally listed with them. Blooms only once during the season. A hybrid China; extremely hardy; fine for cemetery and landscape. Large clusters of medium sized flowers in June. ABC.

—MARGARET DICKSON.

Before Druschki became known, this was our best white hybrid rose. Pure waxy white; extremely hardy; strong grower. Very large flowers. ABC.

—MARSHALL P. WILDER.

Bright cherry red covering an unusually long blooming period. Vigorous and hardy. Flowers globular and shapely. ABC.

—MRS. JOHN LAING.

In making up your rose bed, don't overlook Laing for it supplies a handsome light pink that is difficult to find elsewhere in hardy roses. Fragrant free bloomer. ABC.

—PAUL NEYRON.

Largest of all, though a little coarse when in full bloom. A bright, ruddy pink; very double; fragrant and free-blooming. Cut Paul Neyron when the buds open. Then it is most attractive and also most productive. ABC.

—PRINCE CAMILLE DE ROHAN.

Sometimes called "Black Prince." Darkest red; almost purple. Flowers large, of excellent form and size. Probably the best hardy dark red H. P. rose. ABC.

—ULRICH BRUNER.

Cherry red, extra large, full globular flowers; fragrant and free blooming. Much like its parent, Paul Neyron, except color. ABC.

FLOWERING RASPBERRY

—RUBUS ODORATUS.

Strong growing plant with shreddy canes; large leaves, and clusters of rose-purple flowers. Not valued, except in wild garden. Not hardy. 3-6'

ELDER

SAMBUCUS—A well known native shrub deserving more attention. Solid worth is emphasized by its great massed flowers, fruits and foliage, while its readiness of growth—far from being a rebuke—make it a sure proposition when planted. Will grow in any soil and flourish under shady conditions. If the common and red-berried species are planted together a rich contrast results, the red berries of the one ripening with the bloom of the other. Don't over-plant the Golden variety.

—ACUTILOBA. (Cut-leaved Elder).

Finely divided foliage. 8-12' ABC.

—CANADENSIS. (American Elder).

Great Cymes of white flowers and black berries. June-July. 8-15' ABC.

—NIGRA. (European Elder).

Light green foliage. May-June. 10-20' ABC.

—var. aurea. (Golden Elder).

Bright golden foliage, the metallic luster of which is relieved in season by great irregular masses of white bloom. ABC.

—PUBENS. (Red berried Elder).

Red berries and an interesting grey-green foliage. April-May. 8-12' ABC.

SAGE

SALVIA—Very distinct with reference to flower and foliage. Use for color with shrubbery where it soon becomes woody and carries its brilliant hues well into the season. Not hardy.

—GREGGII. Flower scarlet and dull purple. June-August. 1-3' A.

BUFFALO BERRY

SHEPHERDIA—These plants are prized for prominent places in the shrubbery border, the effect of the light grey foliage being bold and forceful to a high degree. Never plant singly; always in groups. Very resistant to drouth and winter killing.

—ARGENTEA.

Flowers yellowish and dense in small clusters. Fruit edible, red or yellow. June. 12-18' ABC.

SPIREA

SPIREA—As an embodiment of daintiness and exquisite refinement the Spirea has won for itself an enviable place in the realms of ornamental gardening. Its subtle appeal is by means of spikes or garlands of purest white in the spring, and plumes or masses of rose and crimson in summer and fall. From earliest spring till late summer it gives evidence of its popularity in various shapes and forms and colors. It has been ever favored, will be always an essential requisite to garden or landscape planting. The shrubs in form or shape are pleasing, being compact, upright or gracefully drooping. Each has its special use, being adapted to foundation or shrubbery planting or in the garden. Location is of some importance and will be noted under the different species.

—**ALBIFLORA.** (*Collosa alba*).

Stiff upright stems with white flowers in panicles. Best used in the garden. June-August. 2' ABC.

—**ARGUTA.** (*Snow Garland*).

A Japanese specie of stiff irregular growth and white flowers before the leaves. Foundation or border planting. April-May. 4-6' ABC.

—**BETHLEHEMENSIS.**

Flowers white; blushed with rose. June-August. 2-5' ABC.

—**BILLARDII.**

Upright. Flowers light pink and plume-like. Not recommended account rough and straggly. Use in shrub border only. Dry soils. July-August. 4-5' ABC.

—**BUMALDA.**

Stiff and upright with new growth tinged purple. Flower rosy pink in flattish heads. July-September. 24 inches. ABC.

—**var. Anthony Waterer.**

Crimson flowers. Use in the garden. Pruning in August will give fall bloom. July-September. 18" ABC.

—**var. Froebelli.**

Very fine broad leaves and bright crimson flowers, more branching than type. 2-3' ABC.

—**CANTONIENSIS.** (*Reeve Spirea*).

Slender arching branches laden with white flowers. Follows soon after Van Houttei. Use in protected angle of house. June-July. 3-5'.

—**DOUGLASII.**

Deep rose plumes. Use in border or behind lower shrubs about the house foundation. July-August. 5-7' ABC.

—**JAPONICA.** (*Collosa rosea*).

Flowers pale to deep pink. Unfolding leaves give a rich purplish cast to whole plant. June-July. 3-4' AB.

—**PRUNIFOLIA FLORA PLENA.** (*Bridal Wreath*).

Tiny rose-like bloom so very early that the shrub should have some protection. Excellent dark green foliage. April. 4-6' AB.

—**SALICIFOLIA.** (*Meadow Sweet*).

For use in wet places. Plant sparingly. Pinkish flowers. June-July. 4-6' ABC.

—SORBIFOLIA. (Ash-leaved Spirea).

Upright, irregular shrub. White flowers in upright panicles. June. 5-6' ABC.

—THUNBERGII.

A compact symmetrical shrub with fine light green foliage and white flowers. Shy bloomer. Use about foundation or in shrubby clumps. April-May. 3-5' ABC.

—TOMENTOSA. (Steeple Bush).

Upright stems with unusual grey-green foliage. Use in wet ground or shrub border. ABC.

—VAN HOUTTEI. (Garland Spirea).

Known commonly as Bridal Wreath. The acme of the Spireas and as near perfection as could be wished. Perfectly formed shrub with long pendulant branches completely overlaid with the white bloom. May. 4-6' ABC.

STEPHANANDRA

STEPHANANDRA—Is closely related to the Spirea, having the delicate refined beauty and pendant character found in that family. Use in forepart of shrubbery border where an occasional freezing back may be renewed from the roots without serious disturbance to its ornamental functions.

—FLEXUOSA.

White flowers in loose terminal clusters. June. 3-5' A.

INDIAN CURRANT

SYMPHORICARPUS—Low native plants of great value for border planting or use beneath trees. Its tendency to sucker makes it good for binding together steep banks where it succeeds under either clay or gravelly conditions. The flowers are of no importance but the fruit hangs on in great clusters of white or coral red well into the winter. The foliage is exceptionally fine and the habit low and dense, covering well its base.

—RACEMOSA. (Snowberry).

Extremely showy pure white waxen berries in fall and winter. July-August. 2-6' ABC.

—VULGARIS. (Coral Berry).

Reddish branches and deep red berries in pendant racemes. July. 2-4' ABC.

LILAC

SYRINGA—Bring up memories and the fragrance of the past—one of the old-time favorites that stood for the sweet wholesomeness of childhood and inspires the clean thinking and more beautiful processes of one's later days. Their message comes in terms of an exquisite radiance of white, purple and green, and we wonder that such a common thing can waken such a response to beauty. For best effects they must be used in masses without too much mixing of varieties. Never prune till after blooming.

—CHINENSIS. (Rothmogensis-Rouen Lilac).

Slender arching branches and white to reddish-purple flowers in broad clusters. May. 6-10' ABC.

—var. alba. Pure white flowers. ABC.**—var. Sougeana. Deep purplish-red flowers.**

—JOSEKAEA. (Hungarian Lilac).

Somewhat coarse in foliage and habit but valued highly for its late bloom. June. 10-12' ABC.

—PERSICA. (Persian Lilac).

Refined shrub with loosely arching branches and small clusters of pale lilac flowers. May-June. 6-8' ABC.

—VILLOSA.

A distinctly bushy type with rosy white flowers. Very fragrant. May-June. 6-8' ABC.

—VULGARIS. (Common Lilac).

The lilac of all time, with its fragrance and beautiful flowers in great range of whites, purples and blues. May. 8-12' ABC.

—var. alba. White flowers. ABC.**—var. purpurea.** Purple flowers in dense clusters. ABC.

All attain a mature height of 6-9'.

—var. Alphonse Laval. Blue, shaded violet.**—var. Casimer-Perrier.** Creamy white.**—var. Charles X.** Large heads, reddish purple.**—var. Frau Bertha Damann.** Large single white.**—var. Jean d' Arc.** Large, very fine white.**—var. Madam Lemoine.** Best double white.**—var. Marie LeGray.** Pure white; fragrant; free.**—var. Michael Buchner.** Double pale lilac.**—var. President Grevy.** One of the finest double blue.**—var. Senator Volland.** Bright rose.**—var. Souvenir Ludwig Spaeth.** Deep purplish red.

TAMARISK

TAMARISK—A picture of a Tamarisk is compelling, to say the least. The tiny scale-like leaves catch the sunlight and reflect it in a bluish or greenish sheen of splendid quality and excellent effect. The slender graceful stalks and light feathery foliage is enhanced greatly in season by a delicate pinkish bloom—a fitting crown for an unusual plant.

—AFRICANA.

The effect is green and rather regularly upright. Not hardy. April-May. 10-15' A.

—ODESSANA. (Amurensis).

Decidedly bluish with more open delicate texture and free flowing lines. July-September. 6-10' ABC.

VIBURNUM

VIBURNUM—The Viburnums rank among our most ornamental and desirable shrubs, being indeed indispensable from a landscape point of view. Sterling qualities are exhibited in an unusual adaptability to a wide range of conditions and absolute hardness, together with remarkable showiness in bloom and berries. The plant has a way of growing as if it belonged to the country—it fits in—ties up with the general feeling or atmosphere of things in a way that makes it the successful material it is. Use in sun or shade, wet or dry soils, according to variety.

—ACERFOLIUM. (Maple-leaved Arrowwood).

Plant in shade. Flowers in yellow clusters. Blue-black berries. May-June. 3-5' ABC.

—CARLESII.

Very rare. Compact in form with widely oval leaves. Large rosy-white flowers, deliciously fragrant.

—CASSINOIDES. (Foliage glossy green).

White flowers followed by red berries. June. 4-5'.

—DENTATUM. (Arrowwood).

Upright and bushy with an excellent green of foliage. Flowers pure white. Scarlet berries. May-June. 8-10' ABC.

—LANTANA. (English Wayfaring Tree).

Exceedingly interesting with large downy leaves and broad flat flower clusters in white. Withstands full sun. May-June. 10-20' ABC.

—LENTAGO. (Nanny Berry).

Large clusters of cream flowers, followed by bluish black fruits. Leaves bronze in spring; orange and scarlet in fall. Good to screen buildings. May-June. 15-30'.

—MOLLE. Similar to dentatum but with larger flowers and leaves.**—OPULUS. (Highbush Cranberry).**

Upright spreading shrub with white flowers in flat clusters and vivid red berries which last till the next spring. May-June. 8-12' ABC.

—var. sterilis. (Old-fashioned Snowball).

Bothered in wet seasons by aphids or plant lice. Very fine otherwise. May-June. 8-10' ABC.

—var. nanum. (Dwarf Cranberry).

Very compact and restricted in growth. Use for garden hedging. Seldom flowers. 1-2' ABC.

—PRUNIFOLIUM. (Black Haw).

A splendid shrub or small tree with white flowers in open loose clusters and abundant blue berries. April-June. 10-15' ABC.

—TOMENTOSUM.

Strong growing spreading shrub. Handsome flowers and berries in season. Partial shade. June. 6-8' ABC.

—var. plicatum. (Japanese snowball).

A splendid ornamental with large globe-like balls of white. No fruits. Subject to summer leaf injury in zone A. 6-8' BC.

YELLOW ROOT

XANTHORRHIZA—Of value chiefly because of low growth and ability to withstand dry and sterile soils. Use as under-planting and to carry the foliage line to the ground.

—APIIFOLIA.

Exceptionally fine foliage and dark purple flowers. May-June. 1-2' ABC.

Vines and Climbing Shrubs

Among the most effective elements of a domestic planting is the vine. Its importance in a great measure is due to its nearness to places of relaxation—the porch, pergola and summer house. Its use is almost without exception in connection with architecture and its function is to relieve and enhance rather than to hide. Never cover up the details of wood or masonry completely. This but takes away the beauty of construction and in no way improves upon the effectiveness of the planting. In fact it but takes away the underlying reason for the plants.

There are several well marked distinctions or classes to consider. First there is the disc bearing tendrils which permit the clinging to masonry. Then there are kinds which wind their way up a wire or string with or without the aid of simple tendrils. Others are better used to sprawl over banks, walls or bannisters. Some indication of the type will be given under each kind.

AKEBIA

AKEBIA—Beautiful, graceful and rapid growing plants for pillars and posts. They should be used where an open shade is desirable and where they have considerable sun.

—**QUINATA. (Akebia).**

Curious dark rose, cinnamon scented flowers and black beady berries. Climbing to 10-12' A.

WOODBINE

AMPELOPSIS—Known everywhere as a most vigorous, hardy and altogether satisfactory climber or creeper. Its foliage is dense and has good texture, will grow in sun or shade and in any soil.

—**ENGELMANNI. (Engleman Ivy).**

A self climber covering a large surface. Most wonderful fall coloring. 20-30' ABC.

—**QUINQUEFOLIA. (Virginia Creeper).**

The common woodbine of the woods. Very satisfactory for banks and undergrowth. 20-30' ABC.

—**TRICUSPIDATA (Veichii). (Boston Ivy).**

Of delicate, graceful habit, but not entirely hardy. Thrives best on the east and north walls of buildings where the thaw and warm sun of spring do not get at it. Clings tightly to masonry. 10-15' A.

BIRTHWORT

ARISTOLOCHIA—Very rapid growing plants with large coarse leaves giving a very dense shade. Will twine about posts or wires.

—**SIPHON. (Dutchman's Pipe).**

Unique pipe-like flowers in shades of purple, good for shade. A peculiar odor is objectionable to some people. 20-25' A.

BITTER SWEET

CELASTRUS—Very hardy, vigorous, twining plants with bright healthy foliage and bright berries. Always use several plants together to get fruit.

—**ORBICULATUS. (Staff Vine).**

Many orange yellow fruits, hidden away among the foliage. 15-24' ABC.

—**SCANDENS. (Bitter Sweet).**

Bright orange fruits in clusters. 15-20' ABC.

CLEMATIS

CLEMATIS—Is always among the showiest and most satisfactory of climbers when established. Brilliantly colored bloom and interesting fruit late in the season. Much care is necessary for success. A rich clayey soil is best and mounded so the water will not stand about the plant. Water heavily before and during bloom. Cut worms may be combatted by wood ashes or a tin can with the bottom cut out forced down over the plant. Wire or trellis.

—**LANUGINOSA. (Garden Clematis).**

Includes the most brilliantly colored forms. Late summer. 5-6' A.

—**var. Jackmanni.**

Deep velvety purple with a ribbed bar down the center.

—**var. Henryi.**

A very fine white.

—**var. Madame Andre.**

A free blooming crimson.

—**PANICULATA. (Star Clematis).**

A very vigorous climber with fragrant white flowers in the fall. Plant in sun and prune heavily in winter. This plant is the most wonderful of all. 15-20' ABC.

—**VIRGINIANA. (Virgins Bower).**

Very fine foliage deeply cut and misty flowers in the fall. Plant over rocks or shrubbery. 20-30' ABC.

SPINDLE VINES

EVONYMUS—Low evergreen vines of a bushy nature. These plants are not thoroughly acclimated to the middle west, nevertheless, promise to become popular. Best used against walls or to sprawl over other shrubbery.

—**RADICANS. (Evergreen Wahoo).**

Interesting green leaves marked with white along the veins. Variable species with the following varieties.

—**var. carrieri.**

Low shrub with spreading branches; shining, evergreen foliage. Half hardy. 5-6'.

—**var. minima. (Kewensis).**

Dwarf. Similar to above. Used a great deal on tomb stones

—**var. vegetus.**

Lighter green leaves without the marking. Half hardy.

HONEYSUCKLE

LONICERA—A most lovable old fashioned vine, hardy and satisfactory in every way. A rampant grower and fairly free bloomer. Does well in the shade. Will climb over a trellis, up a wire, or sprawl over shrubbery.

—**BELGICA. (Monthly Fragrant).**

Red and yellow flowers all season. Very fragrant. 10-15' ABC.

—**JAPONICA. (Halleana).**

Pure white flowers changing to yellowish. Bloom scarce but continuous. 10-15' ABC.

SEMPERVIRENS. (Scarlet Trumpet).

Most vigorous growing of all the honeysuckles. A bright scarlet. 15-20' ABC.

MATRIMONY VINE

LYCIUM—Rapid growing coarse vines with good foliage and a great crop of berry clusters, which hang on late into the winter. Plant on sterile banks.

—**CHINENSIS. (Matrimony Vine).**

Purple flowers and crimson berries. 30-40' ABC.

TRUMPET VINE

TECOMA—Large woody vines with a good foliage and immense trumpet-like flowers in clusters. Sprouts very badly so don't plant about the home.

—**RADICANS. (Bignonia).**

Scarlet flowers in August. 8-12' ABC.

WILD GRAPE

VITIS—There will be no need going to the woods for wild grapes for wine if you have a place for a few plants at home. Best for thicket or tree planting; but can be used on pergolas.

—**VULPINA. (Frost Grape).**

High climbing, bright green leaves and dark purple fruit with a heavy bloom. 40-50' ABC.

—**LABRUSCA. (Fox Grape).**

Odor and taste of musk to the fruit. 40-50' ABC.

WISTARIA

WISTARIA—Woody twining plants adapted to heavy pergola work or in close connection with architectural features. Its permanency when established can be depended upon especially if planted in sun and given a deep rich soil. Manure dressings will promote growth. Bloom sometimes scarce coming in May and again in August.

—**MULTIJUGA. (Japanese Wistaria).**

Flowers violet blue. 20-30' A.

—**SINENSES. (Purple Wistaria).**

Great hanging clusters of purple pea-like flowers. 20-30' ABC.

—**var. alba. (White Wistaria).**

White flowers. Not hardy. 20-30' A.

Perennials

In order to have a bright and lively garden or border, you need perennials. Much of the shrub planting is done to secure foliage effects—the quiet green against the house foundation or along the boundary lines. To secure a succession of color—continual bloom from spring till frost—make free use of the perennials. True, quite satisfactory color schemes may be worked out with annuals, but annuals require reseeding every spring; almost continuous watering during the long summer months and are only temporary at best. By the proper use of perennials, on the other hand, you secure a permanent, satisfying range of **beautiful flowers** in no other manner possible.

Generally speaking, the perennial is a plant having a hardy root system which lives over from year to year, while the top dies back as winter comes on. They thrive best in moderately rich soil of good physical condition, not too wet. It pays to go deep in the preparation of the ground for then the root growth extends deep below the surface and practically no watering is necessary at any time.

Winter protection is good insurance, even with the hardy types. Leaves, straw, strawy manure or other clean litter may be used, and should be applied only **after** the ground has frozen a few inches. This is to prevent the alternate freezing and thawing towards spring which sometimes destroys the crown of the plant.

Perennials may be used in a variety of places. The garden is the first—a garden of beds of various geometrical dimensions, with the fixed lines of a formal design softened and made more easy. This is the real flower garden; so often sentimentally referred to as the “Garden of our Grandmothers.” These formal flower gardens are just as desirable and in just as true keeping with proper landscape design as they were fifty years ago, provided they are laid out with proper relation to the house or some other fixed architectural detail. Except in rare cases, the flower garden should never be placed in the front lawn, but always at the side or in the rear.

Not all of us have the room or the desire for fixed flower beds. Then, certainly, the border is the place to use perennials. Lay out with curving lines, with a shrubby background and give them plenty of sun. Mix the species more or less indiscriminately as to color, if you wish, using plenty of white. Always use the taller growing varieties in the background and use the bold and spikey growing types at the points which you wish to emphasize. Schemes may be worked

out as to color, form and blooming season, with each morning bringing a fresh surprise in the garden. Nothing in the field of art, neither music, nor literature, nor painting; brings the elevating pleasure and satisfaction so certain to result from the blending of nature's finest shades and colors in the garden.

Please note that following the description of varieties, we have given the season of bloom, the ultimate height growth; also the degree of hardiness as shown by the zone areas.

ACHILLEA

ACHILLEA—Gives good body to the border and does well under reasonable conditions. Very good for cut flowers. Sunlight. Well drained soil.

—**PTARMICA. (The Pearl).**

Blooms freely in clusters of very double pure white flowers. Used in border, or garden, and more especially to soften conflicting notes in the color scheme. All summer. 15-24" ABC.

—**TOMENTOSA. (Woolly Yarrow).**

Carpet-like in growth, its flat heads of yellow flowers find a congenial place in the dry spots of the rockery work. Blooms in June and July. 8-10" ABC.

ACONITE

ACONTUM—Used in the border for their showy helmet-shaped flowers and very effective foliage. They respond to an enriched soil and do well in the sun although the flower is more enduring in the shade. The roots, leaves and flowers are poisonous internally, so don't plant near the kitchen garden or where the children would be likely to molest them. Rather difficult to establish.

—**AUTUMNALE. (Autumn Aconite).**

Flowers large drooping spikes of lilac and whitish-blue. July-September. Grows 3-5' ABC.

—**LYCOCHTONUM. (Yellow Wolfsbane).**

Pale yellow flowers on slender stalks. Used for cut flowers. July-August. Grows 3-4' ABC.

—**NAPELLUS. (Monkshood).**

Large showy flowers in racemes, on erect stems. Both roots and flowers poisonous. The best known. Rich deep blue. July-August. 3-4' ABC.

—**WILSONII.** A very tall form with violet flowers. ABC.

GLAND FLOWER

ADENOPHORA—Plants resembling the Canterbury Bells and coming in shades of blue. May supplant Campanula in many gardens because of permanency of individual plants. Don't disturb after being established.

—**LAMARKII. (Gland Bell Flower).**

Drooping funnel form flowers. Plant in sun. Purple-violet. June-September. 12-24".

ADONIS

ADONIS—Low tufted plants grown for showy red or yellow flowers. Can be planted in border or beneath shrubbery. Dies to ground after blooming.

—**VERNALIS. (Spring Adonis).**

Large yellow buttercup-like flowers in April-May. Sun or half shade. 8-15" AB.

ALYSSUM

ALYSSUM—Low spreading plants with many clustered flowers, the whole plant making a low massive ground cover. Use in rock work or in the fore part of the border. All are very easily grown.

—**ARGENTUM. (Silvery Madwort).**

Leaves small and white beneath. June-July. 8-12" AB.

—**ROSTRATUM. (Beaked Madwort).**

Deep yellow flowers. June-July. 15-20".

—**SAXATILE. (Gold Dust).**

Low, compact, and with a wealth of golden yellow bloom. April-June. 10-12" ABC.

HOLLYHOCK

ALTHEA—Popularity depends not only on associations and sentiment. Virtues as real as any to be found in the garden exist in its strong vigorous growth and expressive lines. They spire up in the background of the border or break up the barren surface of some wall or fence. They may be clumped in corners or used in a formal way along the garden path or walk. In any case the effect is bold and showy to extreme and some beautiful combinations may be worked out of the many shades available. Give them a rich deep soil and a sunny position. Cultivate frequently and cover with manure in winter. Cut the flowers as they deteriorate, and spray with Bordeaux Mixture for rust.

—**ROSEA.**

Many varieties in double and single red, white, yellow and pink. 5-7' ABC.

—**var. Newport?** Soft rose pink. ABC.

—**var. Single Black.** Very dark, purplish-black. ABC.

—**var. Allegheny Fringed.**

Great, beautiful formed flowers of a silken texture and fringed edges. Colors range from palest pink to deepest red. All summer. 6' ABC.

ALKANET

ANCHUSA—Hardy perennials of easiest culture. Flowers come in shades of blue and in clusters resembling those of the heliotrope. Short lived on account of hollow root rot, unless protected during winter with a cone of earth.

—**ITALICA.**

The best species, with trumpet-shaped individual flowers in panicles. Will bloom continuously if not allowed to go to seed. Blue. June-September. 3-5'.

—**var. Dropmore. (Ox Tongue).** Purple flowers.

—**var. Opal.** Blue.

ANEMONE

ANEMONE—One of the "brightest stars" of the year, giving a continuation of bloom from early April into June and from August until frost. They give an exquisite touch to the border during the most trying period of the year and for this reason may well be placed in view of the house windows. They do best in a rich, well drained sandy loam and require an abundance of moisture during the period of bloom. Winter protection appreciated. Hardy when established. Don't disturb.

—**CORONARIA. (Poppy Anemone).**

Many stages of inflorescence are displayed in this race of flowers from purely single to completely double forms. April-June. 6-12" AB.

—**JAPONICA. (Windflower).**

Stately and branching. Plant soft and downy. Lovely under trees in masses. Rose-purple to carmine, with yellow center. September till frost. 2-4½' A.

—**var. Alba.** The familiar white Japanese Anemone.

—**var. Rubra.** A beautiful rose-red, with bright yellow stamens.

—**var. Queen Charlotte.** Semi-double, pale silvery pink.

—**var. Whirlwind.** Semi-double, white.

—**SYLVESTRIS. (Snowdrop Windflower).**

Earliest and hardiest of the genus. White, wavy, fragrant flowers. April-June. 12-18" ABC.

CHAMOMILE

ANTHEMIS—Somewhat similar to Pyrethrum and extremely heavily scented. Dense and bushy in habit. A long growing season supplies an abundance of cut flowers. Use in border. Not favored by many people.

—**TINCTORIA var. KELWAYII. (Golden Marguerite).**

Very finely cut foliage and deep yellow flowers. June-August. 2-3' ABC.

ANTHERICUM

ANTHERICUM—Half hardy, tufted lily-like plants. To get best effects plant in bold groups rather than isolated specimens. Don't disturb for four or five years. Give plenty of water when in bloom.

—**LILIAGO. (St. Bernard's Lily).**

Pure white flowers 1-1½" across and born high above rush-like foliage. Cool border. June-July. 2-3'.

COLUMBINE

AQUILEGIA—These delicate graceful plants typify the lightness and grace of the garden. The flower is tipped with a long interesting spur which secretes the much sought honey bead of the humming bird. Recommended by commission as National flower. They are very hardy and lend themselves to almost any exposure; thriving in sun or shade; and, in their great love for moisture, will tolerate the stiffest clay. In color effects, blue and yellows are very strong, reds being less desirable.

—**CANADENSE. (American Columbine).**

This is the "wild honeysuckle" of our woods and prairies. Scarlet intermingled with yellow. Well adapted to sun or shade and makes a good growth the first season. May-June. 1-2' ABC.

—**CHRYSANTHA. (Golden-spurred Columbine).**

One of the finest for the sheltered border; flowers bright golden yellow, 2-3" across, tinted claret at the tip. Fragrant; extremely showy. May-August. 18" ABC.

—**COERULEA. (Rocky Mountain Columbine).**

Flowers deep blue and white, sometimes tinged with lilac. Foliage greatly divided. Best to treat as a biennial. April-July. 12" ABC.

—**var. hybrida. (Long-spurred Columbine).**

Very free flowering, and probably a cross between chrysantha and coerulea, the sepals being the same shade of blue or pink and the petals white or yellow. May-July. 20" A.

—**GLANDULOSA. (Siberian Columbine).**

One of the hardiest; flowers large, deep blue or white, sometimes shading into an exquisite purple. April-June 1' ABC.

CRESS

ARABIS—Small ground cover used in rock work or as a filler for the border. Not discriminating as regards soil but wants sunlight.

—**ALBIDA. (Rock Cress).**

Fragrant flowers in a sheet of white in April and May. 6-8" ABC

—**ALPINA. (Alpina Rock Cress).**

Resembles A. Albida but has smaller flowers. April-May 6" ABC.

SILKWEED

ASCLEPIAS—Very showy and not very commonly found as a weed growing wild. Worthy of some attention for the wild garden and border.

—**TUBEROSA. (Butterfly Weed).**

Most striking red and orange flowers in flat clusters. Full sun. June-August. 2-3' ABC.

WOODRUFF

ASPERULA—Dwarf hardy plants for shady places and moist soil. Whorled leaves give dense carpet, while flowers give off the fragrance of new-mown hay.

—**ODORATA. (Sweet Woodruff).**

White flowers; make good bouquets. May-June. 6-8" ABC.

ASTER

ASTER—Let us have flowers for fall! You know as the many flowers of the summer pass us by and we approach the end, we are lucky who have foreseen the dearth of bloom and have provided for the same. One of the great charms of the American autumn is the presence of the many-colored reminders of Fall—the Aster. As a fall group they stand unrivalled for brilliancy of coloring and abundance of bloom. If the most weedy sorts are rejected (and there are none such listed below) a few representatives of this family will give extreme and lasting satisfaction. Use in rear of hardy border and at some distance from dwelling to get best effects. Sometimes stalks must be supported by stakes.

—**ALPINUS. (Mountain Aster).**

Large solitary heads with violet rays. Leaves in clusters on the ground. June-July. 6-10" ABC.

—**var. albus.** Like above, with pure white flowers.

—**AMELLUS. (Starwort).**

Distinguished by their velvety foliage and very large single flowers in shades of blue, purple and rose. August-September. 12-24" ABC.

—**NOVAE-ANGLIAE. (New England Aster).**

One of the most widely known and used Asters. Good for open places. Partial to moisture. Densely flowered. October-November. 4-5' ABC.

—**var. Lil Fardell.** Very large flowers. Rich clear pink. ABC.

—**NOVAE BELGII. (New York Aster).**

Very variable with many varieties literally smothered with large flowers in shades of white, rose and blue. Moist places. September-October. 2-3' ABC.

—**var. Elsie Perry.** Glistening rose-pink.

—**var. Feltham Blue.** A good clear blue.

—**var. St. Egwin.**

Of good habit. Rose colored flowers in great profusion.

ASTILBE

ASTILBE—A handsome delicate border plant often confused with Aruncus and Spirea. Its beautiful Spirea-like plumes give a conspicuous mass of bloom in the border while the light feathery foliage is at its best in a cool, half shaded situation.

—**JAPONICA. (Meadow Sweet).**

Branched stems densely covered with flowers. June-July. 2' ABC.

—**var. Grandiflora.** Large panicles. White.

—**var. Multiflora.** Cream white.

—**var. Queen Alexandria.** Crimson.

BOCCONIA

BOCCONIA—Strong growing plants which may be used in isolated groups or planted in connection with shrubbery. The effect is bold and aggressive. Very handsome large leaves. Sucker badly.

—**CORDATA. (Plume Poppy).**

Large heart-shaped leaves, deeply lobed and veined. July-August. 4-6' ABC.

FALSE CHOMOMILE

BOLTONIA—Perfectly hardy plants, resembling the Aster. Attractive in rough places or in mixed border, associated with Asters.

—**ASTEROIDES.**

Aster-like flowers, white to purple. August-October. 3-5' ABC.

BELLFLOWER

CAMPANULA—An improved class of plants for the perennial flower garden. They adapt themselves to either sunny or shady places and are of easiest culture in any rich, well drained soil. A wide range of color, form and texture bid high for the popular fancy. The one element holding them down is a tendency to be biennial or live but two years. A few species are perennial. The flower, as indicated by its name, is of the shape of a bell and comes in shades of pink, rose, violet and blue.

—**CARPATICA.** (Carpatian Harebell).

A perennial unsurpassed for the border. Bell-like, porcelain-blue flowers on erect wiry stems. Perennial. June-July. 9" ABC.

—**var. alba.** Like above, with pure white flowers.

—**MEDIUM.** (Canterbury Bell).

An old favorite with beautiful bell flowers in panicles, single or double. Colors rose or blue. Mass effect of bloom is a big feature in June. Protect in winter. Biennial. June-July 18" A.

—**PERSICIFOLIA ALBA.** (Peach-leaf Bellflower).

Gives an abundance of large single and semi-double white salver-shaped flowers almost 2" in diameter. Perennial. June-July. 24".

—**PYRAMIDALIS.** (Chimney Campanula).

Tall, pyramidal in form. Pale blue to white in color. Biennial. June-July 4-5' A.

—**ROTUNDIFOLIA.** (Blue Bells of Scotland).

Light, graceful spikes of dark, violet-purple flowers. Trailing in habit. Perennial. June-August. 8".

CENTAUREA

CENTAUREA—Blue and violet members of the sunflower family. Excellent for cutting and the border.

—**MONTANA.** (Mt. Bluet).

Silvery foliage and purple flowers turning red with age. June-September. 12-20" ABC.

CHRYSANTHEMUM

CHRYSANTHEMUM—Many times in the fall we find ourselves without flowers and an American Indian Summer is hardly complete without the abundant bloom of the hardy chrysanthemum. This is a large group of shrub-like plants, the flower type being a single white or yellow. Wonderful improvements of late years have placed them on a plane with the Asters with regard to quality and general popularity. Plant nothing but the hardiest kinds as they only will give satisfaction. If a rich soil is available, cultivation is comparatively simple. Cultivation of these plants has been on a large scale, and for a long time, resulting in many varieties, most of which for convenience are placed in the group Hybridum.

—**COCCINEUM. (Pyrethrum Roseum).**

Charming flowers like large daisies, colors various from red, pink to white; feathery foliage. June-July. 1-2' ABC.

—**HYBRIDUM. (Hybrid Chrysanthemum).**

Comes in different types as indicated below.

POM POM TYPE

A class with small, flat, button-like flowers, being very hardy. ABC.

- ALENA.** Early soft pink.
- ALMA.** Large soft pink.
- AUTUMN BEAUTY.** Golden brown.
- BABY MINIATURE.** Late yellow.
- BLACK DOUGLAS.** Medium dark red.
- BROWN BESS.** Mahogany brown.
- CORULATA.** Yellow.
- EDNA.** Early, cream white.
- FAIRY QUEEN.** Shell pink.
- IRENE.** Very early; pure white.
- TENNYSON.** Rosy, pink.

ANEMONE TYPE

Ordinarily some form of ray petal about yellow centers. ABC.

- GARZA.** White.
- GOLDEN QUEEN.** Yellow.
- HYJOS.** Very large; center pink, outer petals white.
- IDA.** Early yellow.
- KLONDYKE.** Yellow ray flowers.
- SUSQUEHANA.** Medium yellow.

DOUBLE TYPE

Small out-door forms similar to the chrysanthemums of the florists. ABC.

- FIREBALL.** Yellow, tipped with crimson.

—**MAXIMUM. (Shasta Daisy).**

A practical creation of Luther Burbank that is deserving of greater use. Flowers of pure glistening white. Adapts itself to any soil or location. Excellent for cut flowers. June-September. 18" ABC.

- var. Alaska.** Larger flowers. Not hardy north.

- var. Edward VII.** Similar to Alaska.

—**ULIGINOSUM. (Giant Daisy).**

Good light green foliage. Flowers should be cut soon after opening. Rich moist soil in border. September-October. 4-5' ABC.

SNAKE ROOT

CIMICIFUGA—Long feathery racemes of flowers borne high above handsome dark foliage. Use sparingly in background or out-of-the-way corner. Any soil.

—**RACEMOSA.** (Black Snakeroot).

Creamy white flowers of disagreeable odor. July-August. 3-8' ABC.

CLEMATIS

CLEMATIS—Very pleasing border plants making a wonderful show in season. Not climbing. (See vines for climbing species.)

—**INTRIGIFOLIA.** Erect. Flowers blue. June-August. 2'.

—**RECTA.** White, sweet scented flowers. June-August. 2-3' ABC.

LILY-OF-THE-VALLEY

CONVALLARIA—The daintiest and most lovable of all our garden herbs, prized not only for the tiny delicate flowers; but the dense ground covering afford by the tops in dark spaces where little else may be grown. Enjoys the shadiest positions, yet will grow in open. Divide clumps when they begin to crowd.

—**MAJALIS.** (Lily-of-the-Valley).

Flowers pure waxy-white, and in gracefully drooping racemes. May. 6" ABC.

COREOPSIS

COREOPSIS—An extremely valuable flower where it has plenty of space. Hardy and easy of culture, this group is due for more general distribution. In the border for two months it appears as a great golden splash, which yields cut flowers of best quality. Use with dense background.

—**LANCEOLATA GRANDIFLORA.**

Richest golden-yellow, more or less sprawling in habit, and one of the most constant flowering of all perennials. June-October. 20" ABC.

—**ROSEA.**

Lower growing, foliage of better green than above. Bloom rose-red. June-October. 12" ABC.

LARKSPUR

DELPHINIUM—The richest and deepest blue of the flower kingdom, and probably the most characteristic flower of the famous perennial gardens of England where their graceful free-flowering habit and bright colors are appreciated to the utmost and used to best advantage.

Give them a sunny position and a well drained soil. New flowers will soon appear if old ones are cut when in full bloom. If the stalks of bloom are cut, as many as four crops may often be harvested. Makes the best of cut flowers. Sprinkle coal ashes about plant if bothered by white worms.

One of the best for free border planting and often used in formal work. Concentrate in masses and clumps for best effects. A classic combination in the landscape is that of Larkspur with *Lilium Candidum* in the rear. They bloom at the same time and when twice the number of lilies is used, the contrast of the deep blue against a pure white is splendid. Colors in blues, purple and white.

—**CAROLINIANUM.** (*Carolina Larkspur*).

Flowers in shades of blue and white. July. 18-24".

—**CASMERIANUM.**

A distinct type resembling Monkshood. Foliage somewhat thin. Deep azure-blue to purple. June-July. 18".

—**ELATUM.** (*Bee Larkspur*).

Foliage very finely divided. Large blue flowers on straight racemes. Deep blue throated with violet. Use in border. June-September. 4' ABC.

—**FORMOSUM.**

Foliage especially dark and divided. Flowers in tall spikes. Use with shrubbery. Gentian blue with white bee. June-July. 2' ABC.

—**GRANDIFLORUM.** (*Chinese Larkspur*).

Foliage light green and very finely divided, almost feathery. Color light blue, often with white or yellow maskings. July-August. 2' ABC.

—**var. album.** A pure white variety of above. ABC.

—**HYBRIDUM.** (*Hybrid Larkspur*). Flowers in dense racemes.

—**var. Belladonna.** An old favorite; transparent sky-blue. ABC.

SWEET WILLIAM

DIANTHUS—One of the oldest garden perennials, a true representative of that type of perennial garden so often ascribed to our grandmothers, unexcelled in its brilliancy and the dense compactness of its cluster. Many species are remarkable for their fragrance. Use in fore part of border or in clumps by themselves. Give them a sunny, warm soil and clean culture, as the grass tends to crowd them out. Colors in white, pink, red and purple.

—**BARBATUS.** (*Sweet William*).

The acknowledged favorite of old gardens, it still proves popular with its bright, odorous flowers. Various shades from rich dark velvety red, almost black, through red pink and variegated to pure white. June-July. 15" ABC.

—**var. alba.** Soft, dull white.

—**var. Newport.** A very live pink.

—**var. Scarlet Beauty.** Bright red; very fine.

—**DELTOIDES.** (*Maiden Pink*).

A trim, sturdy little plant making a good ground cover. Deep pink. May-June. 6-9" ABC.

—**PLUMARIUS.** (*Scotch Pink*).

The common Grass Pink, fragrant, extremely free bloomer and fine for cut flowers. Use in foreground of border or as an edging for beds. Shades of rose, white and lavender. June. 10" ABC.

—**var. roseus flora plena.** Clear rose-pink.

—**var. superbus.**

A dwarf white variety especially good for cutting.

BLEEDING HEART

DICENTRA—Hardy perennial with a much-cut, fern-like foliage and clustered flowers of interesting structure. Being of a succulent nature the plant will not stand much heat and should be planted in the shade, or back in border where the edging plants will hide the sun-blistered foliage of late summer.

—**EXIMIA.** (*Wild Bleeding Heart*).

Use in border or wild garden. June-August. 1-2' ABC.

—**SPECTABILIS.** (*Bleeding Heart*).

Largest flowers of the family. Heart-shaped flowers clustered linearly along drooping stem. Deep rosy-red in color. May-July 2' ABC.

FLAME FLOWER

DICTAMNUS—This plant secretes a gas which may be ignited on a sultry still evening in summer; while its parts, when crushed, give a decided odor of lemon. They are woody at base, extremely long-lived and thrive in a heavy, moderately rich soil and sunny position. By reason of its permanency, habit of growth, and sun loving disposition, it is used often in the open lawn. At the same time its tall spikes and conspicuous coloring make it valuable for the border, while the darkness of its foliage gives a pleasing variety of green.

—**ALBUS.** (Flame Flower or Gas Plant).

Spikes of pure white sweet-scented foliage, and leathery glassy foliage. Cut flowers long-lived in water. June-July. 2' ABC.

—**var. rubra.**

Has rosy-purple and somewhat smaller flowers, and very deeply colored veins.

FOX GLOVE

DIGITALIS—A biennial which under proper conditions will seed itself, thus becoming perennial to all appearances. By proper cutting and culture the plant tends to persist, but to treat as a biennial is usually found most satisfactory. The stately stalks of curiously finger-like flowers accentuate to a high degree any point in the border, while the foliage, although plain and uninteresting, is healthy and covers the ground well. The whole plant has an air of dignity and strength and cleanliness, and suits well the central beds of the garden. Because of the hard vertical lines and massive clumpy habit of the foliage, the plant adapts itself ideally to formal work. It is found a great deal intermixed with Canterbury Bells (see *Campanula*) which modify somewhat the set lines of the plant. They succeed in more or less open places and partial shade, enjoying a rather loose rich soil which, however, does not become too dry. A leaf mulch rots them. Use pine needles, or like material.

—**PURPUREA.**

Most common and usually biennial. Flowers large, in clusters, and ranging from deep purple to purplish-pink and white. June-July. 2' ABC.

—**var. gloxinea flora.**

More robust in growth with spotted character more strongly marked. June-July. 3'.

—**var. alba.** Intense white, June-July, 2'.

GLOBE THISTLE

ECHINOPS—Thistle-like plants suitable for the wild garden or shrubby border. Very picturesque in the sun.

—**RITRO.** Bluish silvery foliage. July-August. 2-3' ABC.

EREMURUS

EREMURUS—Drouth resistant plants from the desert. Long sword-like leaves and a tall flower stalk give this plant an extremely bold and aggressive appearance. Not hardy.

—BUNGEI, (Persian Eremurus).

Very bright yellow flowers. June-July. 4-8'.

—HIMALAICUS.

Hardier than above. White flower heads. June-July. 3-5'.

ERIGERON

ERIGERON—Low, tufted plants very pretty in the border. Easily cultivated in any garden soil.

—GLAUCUS, (Beach Aster).

Small violet flowers like China Asters. May-June. 1' ABC.

ERYNGIUM

ERYNGIUM—Odd thistle-like plants with distinctly blue stalks. Effect of clump is quite striking. Give well-drained soil.

—AMETHYSTICUM.

Deeply cut spiny foliage. June-August. 1-3' ABC.

PLUME GRASS

EULALIA—Striking forms of tall grasses used in the border. Don't over-plant.

—JAPONICA.

Brownish-violet flowers in October. 3-8' ABC.

MIST FLOWER

EUPATORIUM—For the border and wild garden. Blooms late in fall when it can be cut and used dry in a vase a great part of the winter. Very ornamental.

—COELESTINUM.

Light blue to violet in flat heads on the order of heliotrope. September-October. 1-2' A.

FESCUE GRASS

FESTUCA—Ornamental grasses used for low borders about beds in the garden. Very fine and permanent.

—GLAUCA, (Blue Fescue).

Makes a very dense symmetrical row of a bluish-green color. Clip down to 4 or 6 inches. ABC.

PLANTAIN LILY

FUNKIA—A group of somewhat formal characteristics, the body of the plant being of a low dense dome-like structure while the lily-like flowers in whites and blues are projected above the mass of foliage on a tall stout scape. The glistening plantain-like leaves and tall erect clusters of bloom will form an energetic, aggressive line if planted along edges of walks and drives. In some cases they will form a pleasing border for flower beds and in the border they strike an especially prominent note, not only giving variety but contrasting sharply with its neighbors. Considerable discretion is necessary in using this plant as it is extremely easy to over do. The group is hardy, and of easy culture, delighting in a rich moist soil. It demands shade for best development of foliage, while sun is necessary for best flowers. In this regard an intermediate position will probably give better clumps which will tend to last longest.

—**FORTUNEL. (Fortune's Funkia).**

Flowers pale lilac; funnel-shaped. Used in border or in front of shrubbery. July. 18" ABC.

—**OVATA.**

Flowers lavender to deep blue; short tube expanding into delicate bell shape. June-July. 15" ABC.

—**SIEBOLDIANA. (Siebold's Funkia).**

Leaves a metallic blue. Small flowers among the foliage. July. 10-12" ABC.

—**SUBCORDATA. (White Day Lily).**

The most common and probably the best of all. Large spikes of waxy-white flowers with odor of orange blossoms. August-September. ABC.

BLANKET FLOWER

GAILLARDIA—Remarkable for its wealth of daisy-like bloom and richness of shades. When properly cultivated the gorgeous effects of blood-crimson and golden-yellow strikes one of the most intense notes in the border, and the abundant bloom permits of the brightness being transferred to the house where the life of the flower is quite remarkable. They thrive best in a light open soil, with plenty of sunlight and fresh air. Winter-killing is experienced in heavy wet soil, unless protected.

—**ARISTATA.**

Perennial; rays yellow to crimson. Many garden varieties follow.

—**—var. grandiflora.** Gold and crimson. All summer. 15" ABC.

—**—var. Kermisena Splendens.**

Canary-yellow and crimson. All summer. 20" ABC.

GALAX

GALAX—Grown chiefly for the decorative effect of the leaves, which can be cut in the fall and used indoors. Plant in shade. Protect in winter.

—**APHYLLA.**

A neat spreading clump of bright green leaves turning bronze in the fall. White flowers in July. 6-9".

SUMMER HYACINTH

GALTONIA—Luxuriant strap-shaped leaves. Give richest garden soil and a cool moist protected place.

—**CANDICANS.**

Sweet scented, pure white drooping flowers like white bells. July-August, 3-4' A.

CRANESBILL

GERANIUM—Excellent plants for the border because of wealth of fine foliage and bloom almost the whole summer. These are not similar to the house geranium. Sun or half shade.

—**ARMENIUM.**

Very vigorous and floriferous. Dark crimson. June-July. 2-3' ABC.

—**SANGUINEUM.**

Crimson bloom. Wild garden or border. May-July. 1-2' ABC.

—**var. album.** White flowers. ABC.

GEUM

GEUM—Hardy border herbs valued for both flowers and fruits. Moist soil best.

—**COCCINEUM.**

Blood red flowers high above the leaves. June-August. 1-2'.

—**var. Mrs. Bradshaw.** Large flowers, fiery-red and double. ABC.

BABY'S BREATH

GYPSOPHILA—All are primarily fillers. The mist-like bloom in feathery panicles help tide over the hot mid-summer dearth of flowers. Used to trim bouquets. Very drouth resistant.

—**PANICULATA.** Dense and spreading. July-August. 2-3' ABC.

—**REPENS.**

Myriads of tiny white flowers. More trailing and prostrate than above. June-July. 6-8" ABC.

HELEN FLOWER

HELENIUM—Strong growing desirable composites suited to the edges or bays of a shrubbery border or to the rear of the perennial bed. They may be quite extensively grown in such places and will give bloom from early summer to frost. Give them a rich moist soil in a sunny position. If they should become unhealthy, lift, wash roots with an insecticide and place in a new position.

—**AUTUMNAL SUPERBUM.**

Full spreading heads of deep golden-yellow flowers. May-October. 5' ABC.

—**var. Riverton Gem.**

Old Gold suffused with light red which deepens with age. ABC.

SUN FLOWER

HELIANTHUS—Coarse sun-loving plants for distant borders and sterile dry soils where nothing else thrives. Plant always in masses.

—**MOLLIS.**

Most desirable of the perennial sunflowers. Flower single, 3" across. July-August. 3-5' ABC.

—**ORGYALIS.**

Very decorative. Flowers terminate tall unbranched stems densely sheathed with drooping foliage. September-October. 8-10' ABC.

—**RIGIDUS** var. **MISS MELLISH.**

Heavy foliage and large graceful flowers make this plant desirable to mass in waste places. August-September. 6' ABC.

HELLEBORE

HELLEBORUS—Admired for its early blooming habit. Will open up in December or January with a protracted spell of warm weather. Well drained, moist, partially shaded places best. Don't disturb after planting.

—**NIGER.** (Christmas Rose).

Large single flowers. White, flushed with purple. ABC.

DAY LILY

HEMEROCALLIS—This plant is remarkably free of insects and diseases and perfectly hardy. The flower is exceedingly plain and distinct, with a clean-cutness very characteristic, which, taken together with a mild and gratifying fragrance, make an appeal to some which cannot be duplicated by any other flower. For this reason the double forms are not coming into favor, lacking the simplicity expressed by the original type. The individual bloom is short-lived but an adequate succession is provided, the buds of each stem opening regularly as the preceding blossom falls. Makes a good cut flower, many of the buds opening in the water. Almost any good garden soil will do, damp shady places giving best results. Plant, when possible, along borders of ponds where most extravagant effects may be worked out with Siberian Iris; the colors, while being in marked contrast, are so fundamental and quiet as to be in perfect harmony.

—**AURANTIACA.**

Large bright orange flowers only partially opening. June-July. 2-3' ABC.

—**CITRINE.** Pale sulphur-yellow. Very good for cutting. 3'.

—**FLAVA.** (Lemon Lily).

Most common of all with taller stalks and clear canary-yellow flower. June-July. 2' ABC.

—**FULVA.** (Tawny Day Lily).

Flowers larger than flava and of orange-bronze color. July-August. 3' ABC.

—**THUNBERGII.**

Blooms latest of all. Use with flava for succession. ABC.

CORAL BELLS

HEUCHERA—All among the best of the very low perennials. Small flowers from early spring until autumn in white, pink and crimson.

—**SANGUINEUM. (Crimson Bells).**

The dark crimson flowers are borne high above the pale green foliage which hugs the ground. June-September. 12-18" ABC.

—**var. alba.** Pure white flowers.

ROSE MALLOW

HIBISCUS—Perennials which rank among the boldest and most noticeable to be found in the border. The flower is similar to that of the Hollyhock, the plant being a strong vigorous grower and thriving under most conditions, though a wet damp soil is preferred. While considered hardy it is well to cover with a mulch.

—**MOSCHEUTAS. (Swamp Rose Mallow).**

Foliage very effective. Flowers pink with purple eye. Used for waterside planting. August-September. 4' AB.

—**OCULIROSEUS. (Crimson Eye).**

Flowers immense, pure waxy-white, with dark velvety crimson center. Cover in winter to be safe. August-September. 5' AB.

CANDYTUFT

IBERIS—Interesting sub-shrubby perennials adapted fundamentally to the foreground of the shrubby border; but, finds a congenial place in the perennial bed or, if desired, will form a symmetrical clump out in the open. Used often in rock work. They succeed in any good garden soil where sufficient light and air are available. Winter protection advisable.

—**SEMPERVIRENS.**

Very free flowering, white, in elongated racemes. May-June. 1' A.

—**GIBRALTICA. (Evergreen).**

Larger and more showy but not so hardy. White, tinged with rose.

FLEUR-DE-LIS

IRIS—In its diversity of color, ranging through all shades, the Iris literally lives up to its naming,—the "rainbow." The flowers are large and handsome and borne in state, high above the luxuriant mass of deep green foliage which is either erect, stiff and sword-like or more narrow, slender and drooping, giving a grass-like appearance. Taken as a whole, Iris are not exacting as to soil and location. However, certain variations in this respect will be noted below under the separate species. The life of the flower varies from three to six days and the cut flowers may be shipped considerable distances if cut in the bud. Give plenty of water just before blooming and see that the clumps are separated every four or five years. By starting with the German and closing with the Japanese, a succession may be obtained throughout June and July.

—**CRISTATA. (Crested Iris).**

Richly marked lilac flowers borne close to ground. Spreads rapidly. May-July. 4-8" ABC.

—**GERMANICA. (German Iris).**

The type as we commonly know the Iris, with large showy flowers and an exceedingly wide range in shades of blues, whites and purples, and, due to certain lines of hybridization, yellow has been introduced. Transplant in the fall. May-July. 18" ABC.

- var. **Aurea.** The finest pure yellow and most perfect bloom.
- var. **Black Prince.** Deepest purple-blue. Late.
- var. **Florentina.** Creamy-white faintly overlaid with lavender. Early.
- var. **Honorabilis.** Rich golden-brown.
- var. **Innocenza.** Delicate colors in Ivory and Gold.
- var. **Jacqueisima.** Copper and maroon.
- var. **Kharput.** Violet-purple. Long stems. Early.
- var. **La Avenir.** Purple and white.
- var. **Loreli.** Light yellow and blue.
- var. **Madam Chereau.** Delicate blue-white center.
- PALLIDA** var. **DALMATICA.** A fine, deep lavender.
- var. **Mandraliscae.** Lavender-purple.

—**KAEMPFERI. (Laevigata) (Japanese Iris).**

A gorgeous array of colors when successful in securing bloom, but the plant does not adapt itself well to this section of the country. Below are listed three that do best here. Place in a cool moist situation. Move in spring. AB.

- var. **Jana-no-mari.**
- var. **Alba.**
- var. **Pure Gold.**

—**PUMILLA. (Crimean or Dwarf Iris).**

Remarkable for wide range of coloring through yellow, lilac, blue, purple and deep red. They spread very rapidly. Use in border or with taller growing species of Iris. May 8" ABC.

—**PSEUDACORUS. (Water Flag).**

The wild European Iris, with a rather scant but beautiful yellow flower and a rich mass of foliage. Plant in wet places. May-June. 3' ABC.

—**SIBERICA. (Siberian Iris).**

Long grass-like leaves in close tufts, with clusters of deep blue flowers on tall branched stems. Thrives in moist positions. May-June. 2' ABC.

- var. **Alba.** White, veined with lilac.
- var. **Snow Queen.** Ivory-white.
- var. **Orientalis.** An intense blue.
- var. **Blue King.** Clear blue.

—**VERSICOLOR. (Native Iris).**

Leaves slightly bluish. Yellow, veined with purple. Wet or dry soils. June. 18-24" ABC.

TORCH LILY

KNIPHOFIA. (TRITOMA)—An exclamation of the border of a most starting brilliant emphasis. Its value is curtailed, however, by tenderness, so plant in a sheltered well-drained place and cover in winter. Don't disturb after planting. Give a good substantial background against which to show its flaming yellow and crimson.

—**PFITZERI. (Everblooming Flame Flower).**

Most continuous bloom. Scarlet to orange. Good for cutting. July-October. 3-4' A.

—**TUCKER. (Tuck's Flame Flower).**

Brilliant yellow. June-September. Half shade. 4-5'.

PERENNIAL SWEET PEA

LATHYRUS—An extremely hardy and interesting plant adapted for wild tangles or rockery work—never in the border. It grows well in shade, is a rampant grower for a trellis and when once established will last for years. The flowers are clustered, odorous and borne lavishly.

—**LATIFOLIUS.**

The hardiest and most satisfactory. Pink to rose-red flowers. July-September. 6' ABC.

—**var. albus.** Large pure white flowers.

—**var. splendens.** Dark purple to red.

BLAZING STAR

LIATRIS—This is essentially a dry season plant, bearing its flowers in spike-like stalks during late summer. It will grow in the poorest soils, but does best with a richer ground and requiring but little attention. Foliage grass-like. Group in masses in the border.

—**PYGNOSTACHIA. (Kansas Grayfeather).**

Flowers pale purple in a cylindrical spike. The most prominent of the species. August-September. 4' ABC.

—**SCARIOSA. (Blazing Star).**

Flowers in a loose spike. Deep purple. Use on shady knolls or sterile soil. October. 2' ABC.

LILY

LILIUM—The lily is the most stately, attractive, least understood and appreciated of all the garden plants. It would seem that after so many years of demonstration the American public would seize upon a "good thing;" but the fact remains that this "queen of flowers" has yet to make its place in our gardens. Artistic possibilities in connection with their use are little realized; the full value being felt when seen as a daub or white or orange against a background of fresh strong greenery. The appeal is to something more than the eye; the inner depths are touched and the imagination conjures up a significance seldom brought about by any other group of flowers.

The ornamental value of the lily lies entirely in the flowers, the foliage being scant and of a character altogether foreign to the usual blending of parts. Some species, notably *tenuifolium*, *auratum*, *tigrinum*, *speciosum* and *candidum*, are so striking in color as well as lavish in bloom as to call for mass effects at prominent places in the border, and being placed more especially with reference to the horizontal sunlight or morning and late afternoon. Others, because of an exceedingly rigid discipline are more appropriate scattered in clumps with shrubbery or in the perennial border. Use phlox, delphinium, achillea, Columbine, etc., to fill in about.

Success with these regal plants requires but the observation of a few simple rules. They love the warm sun; but their bulbs will not stand a hot, baked soil—hence of mulch of well-rotted manure. The soil most desirable is a loose sandy loam which will be enriched by the top dressing of manure and permits of good drainage. Spray occasionally with Bordeaux to prevent fungus. They should be sheltered from the wind and, if possible, be shaded at noon. Keep bulbs from undue exposure to air and plant deeply, as hard freezing weakens vitality. Winter mulch always will pay. Never allow manure to come in direct contact with root bulbs.

—AURATUM. (Gold-Banded Lily of Japan).

Exquisite, large, ivory-white, with median band of light yellow and raised purple spots. Bears as many as a dozen blooms to a stem. Mass in border. July-August. 3' ABC.

CANADENSE. (Canada Lily).

Native species of easiest culture. Spotted flowers with reflex petals varying from yellow to red on graceful stems. June-July. 1-4' ABC.

—CANDIDUM. (Madonna Lily).

Very ornamental, with its pure pearl-white flowers borne along a strong stem. Fragrant. Use in masses with Delphinium. June-July. 3' ABC.

—ELEGANS. (umbellatum).

Very satisfactory, hardy; shades of yellow and orange to red. Gives fair foliage after bloom is gone. Variable. June-July. 2' ABC

—var. fulgens. A fine orange or salmon-red.**—var. atro-sanguineum. Deep, dark red.****—var. Wallacei. Deep orange, spotted with black.****—LONGIFLORUM. (Trumpet Lily).**

A profusion of fragrant, waxy-white, funnel-shaped flowers. Slightly drooping. July-August 1-3' ABC.

—SPECIOSUM.

Japanese, hardy, thrifty, and delightfully free and informal, though most difficult of culture. Raised dots of red toward center. August-September. 3' A.

—var. album. Nearly white, not so thrifty as the rubrum.**—var. rubrum. Strong growing. Dark red flowers.****—TENUFOLIUM. (Siberian Coral Lily).**

A favorite and easily grown. Flowers brilliant scarlet in clusters. Foliage good. June-July. 15" ABC.

—TIGRINUM. (Tiger Lily).

Remarkably thrifty representative of the old-fashioned garden. Will do most any place in border where they are quite effective in masses. Orange-red. July-August. 4'.

—var. splendens. An improved variety of above.

ORNAMENTAL FLAX

LINUM—Light feathery plants of open delicate growth, and very free continuous bloomers. Use as a filler in the border and always out in full sun for best color effect.

—PERENNE. (Flowering flax).

Flowers on slender leafy stems, sapphire-blue. May-August. 12-18" ABC.

—var. album. Similar to type, flowers pure white. ABC.

CARDINAL FLOWER

LOBELIA—The hardy perennials of this genus are fundamentally water loving plants, so the least we can do in planting them out of their native element, is to give them the shadiest, most damp position available. The flowers are extremely interesting and showy when set off by a deep green background.

—CARDINALIS. (Cardinal Flower or Indian Pink).

Flowers crimson-cardinal, being one of the most showy of our native flowers. August-September. 20".

—SYPHILITICA. (Greater Lobelia).

Flowers pale blue. Less vigorous in the border. September. 20".

—var. alba. Nearly white.

LUPINE

LUPINUS—The Lupines are very showy plants with delicate pea-shaped flowers on long terminal racemes, richly shaded. All are of easy cultivation in an extremely rich soil, but will not stand lime. Mass in the border at any point demanding a low plant, the spikes alone giving the height and bold effects.

—**POLYANTHUS.** (*Garden Lupine*). Flowers deep blue. June-September. 3' ABC.

—**var. albilorus.** White flowers.

—**var. roseus.** Soft rose-pink, borne in great numbers.

LYCHNIS

LYCHNIS—This group includes such old-fashioned names as London Pride, Mullein Pink, Ragged Robin, Cuckoo Flower and Maltese Cross. Any one of these names, in fact, recall the splendor and brilliant coloring of our mothers' flower beds. All are of easiest culture in ordinary garden soil in a sunny location. Their place is in the border or garden bed.

—**CHALCEDONICA.** (*Maltese Cross*).

Dense heads of brick-red flowers. June. 2½' ABC.

—**var. alba.** Pure single white flowers.

—**var. flora plena.** Double variety of bright scarlet coloring.

—**CORONARIA.** (*Mullein Pink*).

Conspicuous by reason of its white foliage and glowing rose-crimson flowers. June-August. 20" ABC.

—**FLOS CUCULI PLENISSIMA.** (*Cuckoo Flower*).

A double form of Ragged Robin, bright pink. Very satisfactory because of its hardiness and lengthy blooming period. April-September. 15" ABC.

LOOSE STRIFE

LYSIMACHIA—Low leafy herbs for rock gardens or damp places beneath trees. Very good for window boxes or to hang from garden vases. Easy of culture in moist places.

—**NUMMULARIA.** (*Money Wort*).

Masses of yellow cup-shaped flowers on prostrate stems. June-July. 1-3' ABC.

MUSK MALLOW

MALVA—Tall striking plants with large single flowers and fragrant foliage. Use in the border. Can be naturalized in uncut grass.

—**MOSCHATA.** Shades of violet and rose. June-August. 1-2' ABC.

VIRGINIAN COWSLIP

MERTENSIA—Charming border plant with large bluish-gray leaves, thriving in rich, loose soil; sun or half shade.

—**PULMONAROIDES.** (*Blue Bells*).

Pretty, tubular blue flowers changing to pink. April-May. 12' ABC.

HORSE MINT

MONARDA—Second only to the Cardinal Flower in the intensity of its crimson flowers. Their growth in the native state suggests use in the darker corners of our landscape schemes. Always plant in masses.

—**DIDYMA.** (Oswego Tea).

Rather coarse and aromatic. Most effective at a distance. June-August. 20-30" ABC.

FORGET-ME-NOT

MYOSOTIS—Low growing plants for carpeting and edging. They appreciate damp situations and shade. Very attractive in masses.

—**PALUSTRIS.** (Forget-me-not).

Foliage in low tuft. Many low racemes laden with tiny bright blue flowerets. May-June. 6-18" ABC.

CATMINT

NEPETA—A sun loving plant from the Caucasus; useful for color effect in the roomy border.

—**MUSSINI.** (Mussin's Catmint).

Many violet flowers on rather weak stems. July-August. 1-2'.

EVENING PRIMROSE

OENOTHERA—Displays glowing masses of yellow in the border or wild garden. Blooms through summer.

—**MISSOURIENSIS.** (Missouri Sun Drop).

Large golden-yellow flowers. Prostrate ascending branches. June-August. 10-12".

STAR OF BETHLEHEM

ORNATHOGALUM—Low umbels of white and green in early summer. Plant in masses, where they increase rapidly. Flourishes in any good well-drained soil.

—**UMBELLATUM.** (Star of Bethlehem).

Star-shaped white flowers which open only during middle of day. May-June. 6-8" ABC.

SPURGE

PACHYSANDRA—A prostrate evergreen perennial with dense glossy foliage. Extremely useful for covering ground under shrubs, trees or among rocks, where it makes a low thick mat of green. Will grow either in full sun or shade. Winter protection.

—**TERMINALIS.** (Japanese Spurge).

Small spikes of whitish flowers, more or less trailing. June. 8" A.

PEONY

PAEONIA—Truly named the flower for the million. Since the time first mentioned in literature, A. D. 536, this plant has had naught for its share but cuffs and hard usage generally. Scorned by the wealth and the nobility of the middle ages it has been left to the poor man's dooryard to perpetuate and save for us one of the grandest and noblest of all plants. By the middle of the 19th century the ostracism of this "vulgar" flower was relieved and since that time horticulturalists have developed such an array of varieties and in such variance of shades as to be almost unbelievable. The following tribute explains its popularity. "Massive without being coarse; fragrant without being pungent; grand without being gaudy; various in form and color." This noble plant rivals the rose in usefulness and ranks with the Rhododendron in impressiveness of growth and perfection of bloom. Other arguments for its favor are its unqualified hardiness, freedom from insects and diseases, vigorous growth and the fecundity of its tubers. The peony is now the flower for the poor and the rich and needs no recommendation other than its own glorious self as seen in almost any location or soil. May be used in hedges by themselves, in cosy nooks or promontories of the shrubbery border or will appear well naturalized as clumps in the lawn. While at first thought the leaf may appear a trifle coarse, the effect as a whole is the opposite and harmonizes best with foliage of a delicate, refined texture. Partial shade lengthens the blooming time and brings out shades to best advantage.

—**ALBIFLORA. (Chinese Peony).**

Has given most varieties. A branched form with the deepest of green foliage. ABC.

—**var. Alexander Dumas.**

Light, rosy pink, mingled with narrow petals of creamy white. Early mid-season.

—**var. Alice Crousse.**

Bright pink with nearly white center. Mid-season.

—**var. Andre Laures.**

Very large; compact; globular rose type. Dark rose, with red reflex and white splashes. Very late. Fragrant.

—**var. Baroness Schroeder.**

Large, round, white; very fine. Mid-season.

—**var. Belle Chatelaine.**

White, with slight touch of violet. Very attractive. Mid-season.

—**var. Bryant's White.**

Pure white; mid-season.

—**var. Candidissima.**

Pure white with sulphur center. Early.

—**var. Couronne d'Or.**

Finest late mid-season white; center petals bordered with carmine; yellow stamens.

—**var. Delachii.**

Deep purple, with crimson reflex. One of the darkest reds. Late.

-
- var. Duchess de Nemours.**
Pure white crown with sulphur-white center. No crimson flecks. Free bloomer.
 - var. Eduoard Andre.**
Magnificent brilliant crimson. Mid-season.
 - var. Felix Crousse.**
Brilliant flaming red with unusually bright center. Very fine. Late mid-season.
 - var. Festiva Maxima.**
By far the best early white; center petals flecked crimson. One of the most attractive flowers for the border or garden.
 - var. Francis Ortegat.**
Rich dark red, semi-double. Red peonies are scarce in early mid-season when this variety blooms.
 - var. Fulgida.**
Dark red with silvery tips. Mid-season.
 - var. Golden Harvest.**
The finest variegated peony, covering the greatest range of colors in a single bloom. Center petals pink, center pure white, carmine tipped. Mid-season.
 - var. Grandiflora.**
Lavender-pink. Very late.
 - var. Grandiflora alba.**
Straw color, fading to pure white.
 - var. Grandiflora nivea plena.**
Large, pure white, very early.
 - var. Grover Cleveland.**
Rich, dark crimson; beautiful rose-shaped buds. Very fine. In color, fragrance and form it compares favorably with the finest roses. Mid-season.
 - var. Humel.**
Cherry pink with silvery tips; drooping stems. One of the old favorite pinks. Late.
 - var. La Coquette.**
A pretty combination of bright rose and salmon-pink. Mid-season.
 - var. La Tulipe.**
Lilac-white; outer guard striped crimson. Large and fine. Late mid-season.
 - var. Madam Ducl.**
Large globular bomb. Light silvery rose.
 - var. Magnifica.**
Fleshy-white, with creamy-white center; very large. Mid-season.
 - var. Margaret Gerard.**
Large, semi-rose, pale hydrangea-pink; central petals flecked with carmine.
 - var. Marie Lemoine.**
Pure white, with cream-white center. The finest late white. Flowers cut from our Marie Lemoine on July 1st, kept in perfect shape in the office vase until July 10th.
 - var. Meissonier.**
Dark, reddish-purple. Similar to Grover Cleveland in color, form and fragrance. Mid-season.
 - var. Mikado.**
Japanese single; dark, fiery crimson, with gold-tipped center. Best single red peony. Late mid-season.

—var. **Model de Perfection.**

Light violet-rose, darker in center. Fragrant. Late.

—var. **Monsieur Dupont.**

Milk-white; center splashed with crimson. Mid-season.

—var. **Monsieur Jules Elie.**

Shell pink, yellow center; its delicacy of bud and bloom equals the finest roses. The handsomest pink. Early mid-season.

—var. **Paginini.**

Not generally listed by other growers but one of the finest for color. White, overlaid with pale lilac. Very fine. Late mid-season.

—var. **Queen Victoria.**

Flesh-tinted white, with crimson specks in center. Mid-season.

—var. **Rubra Superba.**

The best late red. Deep rose crimson to purple; very fine purple buds; most prolific of all peonies to bloom. The best red cut-flower peony. Very late.

—var. **Rubra Triumphans.**

Large, very dark crimson. Early mid-season.

—var. **Solfratare.**

Nearest yellow. Handsome sulphur-yellow or straw color. Mid-season.

—var. **Souvenir de L'Exposition de Lille.**

On account of its fine silvery reflex, Souvenir is classed with the pinks though its color is really a clear cherry-red. Late mid-season.

—var. **Triomphe de L'Exposition Universelle.**

Pale hydrangea-pink, splashed with red, guard petals changing to nearly white. Very fine. Mid-season.

—var. **Whiteleyi.**

Blush white; mid-season.

—var. **White Japan.**

Nursery visitors during the peony season marvel at the gorgeous display of this large, pure white, single peony, with yellow center. Blooms in clusters, single flowers often measuring eight inches across. Very attractive. Mid-season.

—**MOUTAN. (Tree peony).**

Beautiful shrub, with large, double flowers. More difficult to grow than herbaceous peonies; not hardy, needs a sheltered position and winter covering. Very difficult to secure bloom.

—var. **rosea superba.**

Double rose. No bloom till third year. 3-6' A.

—**OFFICINALIS. (Common Peony).**

—var. **alba.**

Ten days earlier than Festiva Maxima or any other white listed. Plant a few so as to be sure to have peonies on Decoration Day, even during a very late spring season.

—var. **rubra.**

Brilliant crimson; in all other respects similar to Officinalis alba.

—**TENUIFOLIA. (Fringe-leaf peony).**

Densely leafy up to flower with very finely cut leaflets which form a moss-like cup as a receptacle for the lone bud.

—var. **flora plena.**

Dazzling red; fringe-leaf; very earliest. Two weeks ahead of all other reds except Officinalis rubra.

POPPY

PAPAVER—The lover of gorgeous colors can in no better way gratify his tastes, than to sprinkle freely in his border of these delicate flowers, for of all the lists of perennials, the Poppy stands for a dazzling, sumptuous brilliancy that cannot be equalled by any other flower. The Iceland Poppy is short-lived but will re-seed itself if a few pods are allowed to ripen. The Oriental Poppy is longer-lived and has an extremely ornamental foliage which dies down during the hot weather and returns in the fall. Because of this habit and by reason of such brilliant hues, white flowers should be used in connection.

—**ALPINUM.** (Alpine Poppy).

Large, fragrant, white flowers with yellow centers; finely divided foliage. May-June. 6" ABC.

—**NUDICALE.** (Iceland Poppy).

Well named "the glory of the Arctic regions." See to it they have plenty of moisture in fall. Pick for cut flowers in morning. May-September. 1' ABC.

—**var. album.**

Pure white.

—**var. aurantiacum coccineum.**

Orange red.

—**var. sulphureum.**

Bright yellow.

—**ORIENTALIS.** (Oriental Poppy).

Enormous flowers six to eight inches across with a satiny crimped texture and peculiar hairy stems. Deep scarlet. May be used with shrubbery. June-July. 2' ABC.

—**var. carnea.**

Flesh-colored.

—**var. Mrs. Perry.**

A delicate pink.

BEARD TONGUE

PENTSTEMON—Easily grown plants suitable for border and rock garden. Tubular flowers on slender, drooping stems. Any good garden soil.

—**ACUMINATUS.** (Sharp-leaved Beard Tongue).

Flowers lilac, changing to violet. June-July. 1-2' ABC.

—**BARBARTUS TORREYI.** (Bearded Pentstemon).

Attractive scarlet flowers; stems more erect. Gray-green leaves. July-August. 4-5' ABC.

—**PUBESCENS.** (Downy Pentstemon).

Not a showy species. Pale violet. May-July. 2' ABC.

GARDEN PHLOX

PHLOX—Among the most permanent and satisfactory of the perennials, the Phlox ranks high. Its simple, trim, brightly colored flower wins its way to the heart of the most disinterested observer, while its delicious fragrance invades the whole place, bringing back old associations intermixed with that peculiar sympathy that leads us back to our mothers' garden.

This flower is adapted fundamentally for massed effect, and should be used in this manner either in the border or in separate beds. Its long season of bloom and permanency of clump demand frequent manurings and some cultivation. The plants should be set in a warm sunny place and be given a deep rich soil, although they will do in a poorer one. By pinching back the terminal buds, blooming may be delayed until late, or a second crop may be obtained by picking.

—**AMOENE. (Hairy-leaved Phlox).**

Low, with flat clusters of flowers covering the entire plant. Use for interspacing in the border. Flowers pink to purple. April-May. 6" ABC.

—**DIVARICATA. (Sweet William).**

The fragrant blue of our woody hillsides. Give a rich moist soil in shade. May-June. 15" ABC.

—**PANICULATA. (Garden Phlox).**

This is the type of all our garden phlox, and parent of the following varieties. The foliage is good all summer and the flower heads come in all shades from white to deep red and purple. July-October. 30" ABC.

—**var. Anton Mercie.**

Pure white lilac border.

—**var. Argon.**

Delicate salmon-rose. Dwarf growing.

—**var. Aubrey Alder.**

Flame and rose. Tall.

—**var. Aurora boreale.**

Dull orange-scarlet with deeper eye. Dwarf.

—**var. Baron von Dedum.**

Large heads of bloom. Lustrous blood-red.

—**var. Baron Comte.**

Pink border with purple center.

—**var. Eugene Danzenvilliers.**

Lilac-blue with white center.

—**var. Dawn.**

Pale, rose-pink.

—**var. Daybreak.**

Shell pink.

—**var. Eclairer.**

Purple-carmine with lighter center.

—**var. Eiffel Tower.**

Beautiful mauve, rosy-red center.

—**var. Elizabeth Campbell.**

Very large stalks. Salmond with pink center.

- — **var. Evenement.**
Coral pink.
- — **var. Frau Anton Buchner.**
Finest pure white.
- — **var. Gifeon.**
Peach blossoms.
- — **var. Henry Merger.**
Large white, red center.
- — **var. Jeanne d'Arc.**
Pure late white.
- — **var. Le Printemps.**
Carmine-rose. White center.
- — **var. Loki.**
Salmon-pink. Carmine eye.
- — **var. Madame. Paul Dutrie.**
Large, delicate pink.
- — **var. Mrs. Jenkins.**
Tallest pure white.
- — **var. Nana coerulea.**
Very dwarf with lilac-blue flowers in great profusion.
- — **var. Pantheon.**
Cerise-salmon, white center.
- — **var. R. P. Struthers.**
A bright rose-carmine. A most unusual shade.
- — **var. Richard Wallace.**
White, with rosy crimson eye.
- — **var. Rijnstroom.**
Very large trusses. Beautiful clear pink.
- — **var. Tapis Blanc.**
Immense white flowers of perfect form.
- — **var. Venus.**
Bright salmon.
- — **var. vonLassburg.**
One of the best whites.
- — **var. W. C. Egan.**
Salmon-pink, red center.
- **SUBULATA. (Moss Phlox or Ground Pink).**
Tufted and procumbent. Used as a mat to cover undesirable ground or between taller plants in the border. April-May. 6" ABC.
- — **var. Alba.**
Similar to type. White flowers.

FALSE DRAGON HEAD

PHYSOSTIGIA—Hardy herbaceous plants growing in clumps. Aggressive shades of purple and rose. Use in the border for striking effects. Rich moist soil. Full sun. Should be divided frequently.

— **VIRGINIANA. (Lion's Heart).**

Flowers an inch long in white, rose and purple. July-August. 1-3' ABC.

JAPANESE BELLFLOWER

PLATYCODON—Semi-shrubby plants with large open bell-shaped flowers. Flowers white and variegated. Will not stand up in poorly drained ground. Sun or shade.

—**GRANDIFLORUM.** (Balloon flower).

Upright and dense in habit. July-October. 1-3' ABC.

—**var. Alba.**

Earlier to bloom, and larger flowers. June-September. 1-3' ABC.

—**var. Mariesi.**

Variegated. Purples and lavenders. Strong growth. ABC.

LEADWORT

PLUMBAGO—Beautiful half-shrubby plants of free-flowering tendencies, in shades of blue. Cover in winter.

—**LARPENTAE.**

Cobalt-blue flowers, later turning violet. August-September. 6-12" A.

GREEK VALERIAN

POLEMONIUM—Old-fashioned flowers of the garden, very regular in growth and habit.

—**REPTANS.** (Dwarf and bushy).

Flowers light blue. April-May. 8-12" ABC.

CINQUEFOIL

POTENTILLA—Tenacious, handsome-growing plants which do well in most any soil. Use in border or wild garden.

—**FRUTICOSA.** (Shrubby Cinquefoil).

Silky foliage and bright strawberry-like flowers. June-September. 1-3' ABC.

BUTTERCUP

RANUNCULUS—Most wonderful display during blossoming season. but not very hardy. Cover in winter, or take in the tubers for cellar storage. Border or rock garden.

—**ACRIS, var. flora plena.** (Yellow Batchelor's Button).

Rich, glossy golden-yellow. May-June. 1-3' A.

CONE FLOWER

RUDBECKIA—Several forms of striking growth and foliage, with an abundance of flowers in a wide range of foliage. They find almost any soil or position congenial, shade or sun, and demand comparatively little care. If cut back after blooming, a second crop for fall may be enjoyed. Plant in clumps or masses, dividing at least every third year. Use sparingly as they are often over-planted. Appropriately used with shrubbery.

—**LACINIATA. (Cone Flower).**

Large daisy-like flowers with lemon-yellow re-curved ray florets. Use in border. July-August. 5' ABC.

—**—var. flora plena. (Golden Glow).**

A double, golden-yellow variety of above. ABC.

—**PURPUREA. (Purple Coneflower).**

Flowers pinkish-purple. ABC.

SPECIOSA (NEWMANII). (Black-Eyed Susan).

Rich orange-yellow flowers with black center. Use in border. August-September 2' ABC.

SAGE

SALVIA—Perennial plants for the border, or to mix with shrubbery for color effects.

—**AZUREA.**

Sky-blue flowers. August-September. 1-5' ABC.

—**PRATENSIS. (Meadow Sage).**

Flowers clustered in large spikes. Deep violet-blue. June-July. 2-3' ABC.

SANTOLINA

SANTOLINA—Shrubby, downy plant, valued for its silvery foliage, evergreen and fragrant. Use in groups or in the border. Give winter protection. Loves sun.

—**CHAMAECYPARISSUS. (Lavender Cotton).**

Inconspicuous, greenish-yellow flowers. July-August. 18-24" A.

SOAPWORT

SAPONARIA—Mostly trailing plants for dry spots in the garden or border. Will thrive in any well drained soil.

—**OCYMOIDES. (Rock Soapwort).**

Covered with small, pink to violet flowers from late May till August. 6-9" ABC.

SAXIFRAGE

SAXIFRAGA—A vigorous, attractive group, not entirely hardy, but deserving the winter protection it requires.

—**COTYLEDON PYRAMIDALIS.**

Numerous white flowers in pyramidal panicles on tall stalks above rosette of silvery leaves. June-July 1-2' A.

STONECROP

SEDUM—Essentially the plant for the masses, not being at all fashionable, as every one can grow them. Of a rich, succulent nature which withstands the most adverse conditions. They prefer a dry, sandy or gravelly soil, but grow in heavy clay. Make excellent plants for the rockery and are adapted for edging because of their erect, symmetrical and bushy growth.

—**ACRE. (Love Entangle).**

Bright green foliage and flowers in yellow masses. Creeping. June-July. 3" ABC.

—**SEIBOLDII.**

Pink flowers and slender purplish branches. One of the best. August-September. 18-24" ABC.

—**SPECTABILIS. (Showy Sedum).**

Flat cymes of white to rosy-purple flowers. Erect. August-October. 15" ABC.

GOLDEN ROD

SOLIDAGO—Together with the Fall Aster this well known roadside friend is rather deprecated. However, people of best taste along artistic lines are prone to pass up some of the more showy, gaudy types, and we find in many of the better gardens of the country the different shades of the Goldenrod with the sky-blue of an Aster clump, forming an inspiring picture, rich, yet quiet and enduring. Although they grow wild under poor conditions, a little care will so improve the plant as to be extremely noticeable.

—**CANADENSE. (American Goldenrod).**

Spikes of golden-yellow flowers. July-October. 3' ABC.

SPIREA

SPIREA—Rather erect growing plants with attractive foliage and abundant flowers in rough, plummy panicles. Place them with foliage plants and in the border. May also be used for edging beds of shrubs. Hardy; thrive in any garden soil.

—**ASTILBOIDES. (Astilbe-like Meadow Sweet).**

Graceful plumes of creamy-white flowers. Dark, glossy, decorative foliage, June-July. 2' ABC.

—**FILIPENDULA. (Dropwort).**

Low, tufted plant with tiny, fragrant flowers, yellowish-white, often tipped with red. Fern like foliage. June-July. 12-18" ABC.

BETONICA

STACHYS—Flowers in showy spikes. Shapely, dark green leaves. Wild garden or border. Moist soil and full sun.

—**BETONICA. (Wood Betony).**

Purple flowers. June-July. 1-2' AB.

THRIFT

STATICE—Plants combining the characteristics of a ground cover with those of a good border plant. A very luxurious foliage covers the ground closely, while clouds of tiny flowers are raised above on spreading panicles. Use in border row at the edge of shrubbery. Plant in sun.

—**LATIFOLIA.** (Sea Lavender).

Bluish-purple flowers in July and August. 18-24' AB.

STOKE'S ASTER

STOKESIA—A rare and distinct American perennial. Hardy and extremely drouth resistant, it is sure to make a place for itself under our prairie conditions. Should be given a well-drained sandy loam. Good for cut flowers.

—**CYANEA.**

Blue to purplish-blue. August-October. 15" ABC.

MEADOW RUE

THALICTRUM—Includes forms suited for border and rockery. They are esteemed especially for their beautiful feathery flower heads and exceptionally interesting foliage. They should have a well drained loamy soil.

—**AQUILEGIFOLIUM.** (Feathered Columbine).

Graceful foliage resembling that of Columbine. Flower white with purple stamens. June-July. 3'.

—**MINUS ADIANTIFOLIUM.** (Maidenhair Thalictrum).

Foliage like that of Maidenhair Fern. Greenish-yellow drooping flowers. June-August. 9".

THYME

THYMUS—Extremely interesting, low growing or prostrate aromatic herbs. Used in the rockery and as edging for paths or walks. Gives a delightful odor when bruised, for which reason it is sometimes planted where it will be crushed under foot.

—**SERPHYLLUM.** (Mother of Thyme).

Creeping, pale-lilac evergreen. July-September. 3".

WOOD LILY

TRILLIUM—One of the choicest early spring plants, extremely showy yet coarse in no degree. A very characteristic flower of American woods, delighting in a moist rich soil and partial shade. They should be planted alone in masses, with ferns, or may be naturalized in grassy corners where the lawn mower is not used. Are best removed in mid-summer and should be planted deeply.

—**GRANDIFLORUM.** (Wake Robin).

Pure white, changing to rosy pink. May. 1' ABC.

GLOBE FLOWER

TROLLIUS—This group has an interesting individuality which makes itself felt, as is attested by a general popularity. Its showy flowers, floriferous habits and compact form go to make a splendid plant for the border. Thrives in a rich moist sandy loam.

—**ASIATICUS.**

Flower rich orange, almost Saffron. Leaves finely divided and touched with bronze. May. 15" AB.

—**EUROPAEUS.**

Lemon-yellow in color. May-July. 15" AB.

—**JAPONICUS.**

Yellow flowers. 4-8" AB.

TUNICA

TUNICA—Charming little plant with tiny flowers and small, dark green foliage. For edging and rock garden. Any soil. Sun preferred.

—**SAXIFRAGA.**

Pink flowers. June-July. 6-10" ABC.

VALERIAN

VALERIANA—Hardy perennial of easiest culture and another representative family of the old-fashioned garden. Valued especially for the spicy fragrance of flowers and leaves.

—**OFFICINALIS. (Garden Heliotrope).**

Flowers whitish to rose or lavender. June-July 2' ABC.

SPEEDWELL

VERONICA—Characterized by long racemes of usually blue flowers. In the border they strike an especially dominant chord by reason of color and deep green foliage. They are free flowering and succeed in most good garden soils in the sun.

—**INCANA. (Hoary Speedwell).**

Small, blue flowers on slender spikes. June-July. 1-2' ABC.

—**LONGIFOLIA. (Speedwell).**

Most common; a fine border plant. August-September. 2' ABC.

—**var. rosea.**

Pink flowers.

—**var. subsissilis.**

More compact and robust than the above type. Flowers large, intense lustrous blue.

—**REPENS. (Creeping Speedwell).**

Glossy green leaves and blue-tinged flowers in May. ABC.

—**RUPESTRIS. (Rock Speedwell).**

More profuse bloomer than above and flowers purplish, trailing. May and June.

—SPICATA. (Spike-flowered Speedwell).

One of the best. Blue flowers on dense spikes. June-July. 2-2½' ABC.

—TEUCRIUM. (Hungarian Speedwell).

Dense growth and rapidly spreading. Peacock-blue. May-June. 10-12".

VIOLET

VIOLA—Well known inhabitant of the woodlands. Their native home suggests care under domestication. They should have half shade and a light covering of leaves or straw in the fall. A rich soil and plenty of moisture is necessary for best success.

—CORNUTA. (Horned violet).

Tufted plant with faintly scented flowers the size of a small Pansy. All summer. 5-8" ABC.

—var. lutea major.

Golden-yellow.

—PALMATA (CUCULLATA). (American Violet).

Thick clumps of blue flowers. For naturalizing. ABC.

—PEDATA. (Bird's foot violet).

Good foliage, and flowers varying in shades of violet to white. May-June. 3-6" AB.

PERIWINKLE

VINCA—A low hardy trailing plant with shining bluish evergreen foliage. It does best in a moist half-shaded position, but will grow in a heavy dense shade, if necessary. Forms a thick mat, excluding all other vegetation. Not hardy.

—MINOR. (Trailing Myrtle).

Pretty dark blue flowers. April-May. 4" A.

SPANISH BAYONET

YUCCA—Striking plants of a tropical appearance. A stiff clump of sword-like leaves is surmounted by a stalk of beautiful creamy-white bell-shaped flowers. Plant in the sun. Appears well naturalized in groups in the lawn or in the shrubbery border where good greenery throws its characters in strong relief. Very drouth resistant.

—FILAMENTOSA. (Adam's Needle).

June-July. 5-6' ABC.

Spring Bulbs

(For Fall Planting Only)

There comes a time in the year when the touch of spring rouses our sluggish processes and instinctively we wait the first sure signs, and we become immediately receptive for all the good things nature has in store for us. Of all the garden events the keenest pleasure is felt at this time when the Snowdrop and Crocus break through the snow. There is something primordial in the appeal of these first tiny emissaries of the new season. They come to our new born sensitiveness as something refreshing and revigorating.

Very little attention is necessary for this type of plant. They should be planted **only in the fall**, in order that their roots may become established for the very early bloom. The soil in all cases should be fertile and loose, a sandy loam being most desirable. An ideal way is to plant in irregular patches, at the edge of the shrubbery borders or about the lawn, beneath the trees. Beds may be used and definite color schemes worked out. These beds should be well drained. A thin layer of sand, upon which to rest the bulbs, will more than repay the trouble. Be sure the beds are well placed with regard to the general scheme of the lawn.

CROCUS

CROCUS—Large, funnel-shaped flowers with extremely brilliant coloring. Plant in early or middle October in full sunlight or half shade and where the grass is not too thick. Place two to three inches apart for mass effect and three to four inches in depth. Permit the foliage to ripen or die back before cutting this part of the lawn. Blooms just after Snowdrop.

—**VERNUS.** (Spring Crocus).

Many varieties and shades in white, yellow, lavender and purple. March and April. 5" ABC.

SNOWDROP

GALANTHUS—First to unfold the good news of spring, the gently drooping petals come before the snow has quite gone and lightens the bare dreariness of that early time. They naturalize best in moist shady spots and supply a great abundance of bloom to cut.

—**NIVALIS.** (Snowdrop).

HYACINTH

HYACINTHUS—The essence of fragrance and soft colors. Its early bloom commands the highest type of admiration. These bulbs are adapted to formal beds where richest combinations and contrasts can be worked out. Do best in full sunlight.

—**ORIENTALIS. (Dutch Hyacinth).**

Densely set, single stalk; white with shades of yellow, pink, red and lavender to purple. 8-15" ABC.

—**var. albulus. (Roman Hyacinth).**

Similar; but with several slender, graceful stalks less packed with bloom. 8-12" ABC.

NARCISSUS

NARCISSUS—For many centuries, flower lovers have shown great interest in the many free blooming, showy and varied forms of this group. It has been a prime favorite in all respects and deserves consideration in way of location and care. They are especially adapted to the shrubbery border or for use with hardy, herbaceous plants. They withstand adverse conditions; but respond wonderfully to intelligent usage. Give them an open, sandy loam, in shade or half shade. They love moisture and plenty of food. Manure must never touch the bulbs. Apply top dressing after the foliage goes back.

—**JONQUILLA. (JONQUIL).**

Very slender and graceful, Fragrant flowers in various shades of yellow. April-May. 8-10" ABC.

—**PSEUDO-NARCISSUS. (Daffodil).**

Variable as to form and ranging through colors of white and yellow. April-May. 12-18" ABC.

—**POETICUS. (Poet's Narcissus).**

Very popular because of strong growth and hardiness. April-May. 12-18" ABC.

SQUILL

SCILLA—Attractive, drooping, bell-shaped flowers on upright spikes. Best all round location is in edge of shrubbery border where they will need no care except an occasional dressing of manure. Mass the planting.

—**AMOENA. (Star Hyacinth).**

Blooms freely but not so attractive as *Siberica*. Very hardy. Does well in shade. Rich blue. March-April. 6-9" ABC.

—**SIBERICA. (Siberian Squill).**

Attractive clusters of deepest blue. Allow it a sheltered place. March 5-7" AB.

—**var. alba.**

Pure white flowers.

TULIP

TULIPA—The tulip, in spring, brings us myriad colors and shades of a wonderful richness in texture. Its wealth of color and perfect form carry the atmosphere of oriental magnificence and the Turk who fostered its early development. The plant of today is the result of centuries of highest cultivation and selection and has at times enjoyed streaks of popularity that bordered on mania. We take them more quietly now—nevertheless enjoying their beauties to the utmost. The classification of the tulip is very inexact; so for practical purposes the division is made arbitrarily into early and late blooming species.

—**SUAVEOLEUS. (Early Blooming Garden Tulips).**

In bright red, yellows and variegated. Fragrant. April. 6-8" ABC.

—**GESNERIANA. (Late Blooming Garden Tulips).**

Comprising largely the Parrott and Darwin types with larger flowers and later bloom. May. 6-18". ABC.

Tender Bulbs

(For Spring Planting Only)

Reaching perfection in late summer and fall, when many flowers are faded and gone, we must not forget the Canna, Dahlia and Gladiola. They cannot be treated as other bulbs or as perennials, as frost is fatal to the tubers. Dig them in the fall, before the ground freezes, store them in an ordinary cellar, in shallow boxes. Don't let them freeze. If you wish to secure a longer bloom period, don't plant them all at once but distribute the planting a week or ten days apart during April and May.

CANNA

Canna—Their showy foliage in green and bronze, crowned by masses of yellow and red flowers display great attractiveness, rather too loud and glaring, unless properly used. The following varieties cover the combination color contrasts and are most desirable.

—**CHAS. HENDERSON.**

Green foliage; crimson flowers. 4'.

—**FLORENCE VAUGHN.**

Green foliage; yellow flowers. 5'.

—**KING HUMBERT.**

Bronze foliage; orange-red flowers. 4'.

—**WYOMING.**

Bronze foliage; yellow flowers. 7'.

DAHLIA

Dahlia—Very showy for late fall bloom; in great variety of form and colors; for ordinary planting we suggest ordering mixed varieties; if special forms of cactur or decorative kinds are desired, they should always be ordered in named sorts. Subject to aphid and injury from drouth.

GLADIOLA

Gladiola—Very popular and attractive among the fall cut flowers. Best planted in masses or beds. Plant four to five inches deep and they require no staking.

—**AUGUSTA.**

White, flecked with pink.

—**AMERICA.**

Delicate pink.

—**FRANCIS KING.**

Orange-scarlet.

—**BARON HULOT.**

Best purple.

—**EUROPEA.**

Extra large, fine, pure white.

—**GOLDEN KING.**

Handsome yellow.

—**MRS. WATT.**

Clear cerese.

—**PRINCEPS.**

Scarlet with white splotches.

—**PENDLETON.**

Beautiful combination of red and white.

—**PANAMA.**

Large, clear, beautiful shell-pink.

—**PEACE.**

A much larger and finer Augusta.

Evergreens

The use of evergreens in the landscape is more definite, perhaps, than that of any other class of materials. The line between good use and bad is more easily drawn and the places where they go more surely pointed out.

They are essentially for winter effect. The greenery and the snow present a color combination which, in a measure, makes up for the drab aspect of the rest of winter out-of-doors. Moreover, a great deal of comfort may be derived in the form of shelter belts or windbreaks.

The taller forms should always be planted away to the

sides or in the rear, where they enframe the picture, or give it background. For windbreaks, we recommend a single row of pines or spruces, planted eight feet apart in the row, though a better plan is to set a double row with pine in the outside row and spruce on the inside, breaking joints with the pines, the rows ten feet apart and trees eight feet apart in the rows. This soon becomes a living wall of green—a protection from the winter's blasts and a thing of beauty and refinement. As an added asset to the value of the property, it ranks at the top.

The low growing kinds, or dwarfs, may be used about the stone or brick foundation walls; to fill in hard angles or to soften heavy corners. Plant them always where they have an intimate relation to the activities of the home; where they can be seen and felt. They come in all shades of blue, green, yellow and brown and have texture and form unrivaled.

In handling and planting, **never allow the roots to become dry or exposed to the sun or air.** That's deadly. Their sap is resinous and once hardened, no amount of moisture will dissolve the resin. Dip the roots in thin mud as soon as unpacked; leave them there till the last minute before setting out, then, if you use no water in planting, you must tamp the earth about the roots as firm as when setting a post. Remember, evergreens are always in full leaf, evaporation is going on constantly, and, unless firmly established when planted, the wind will work them loose, destroy the young root hairs and permit the air to get down to the roots. Cultivate once each week till July first, then **mulch heavily** with straw, lawn-clippings or litter, to keep the ground moist and cool during the hot days of July and August. Never sprinkle the tops of your evergreens.

FIR

ABIES—A great family of evergreens, but of limited value here in the prairie region because the foliage is unable to endure our hot, dry weather of harvest days. When used, all except Concolor, should have partial shade. Recommended only for underplanting large, established evergreen trees.

—BALSAMIA. (Balsam Fir).

Brighter, heavier needles than Spruce; attractive while young; aromatic fragrance. Must have partial shade. Half hardy. 30' BC.

—CONCOLOR. (Colorado Fir).

Very fine, silvery green foliage. The hardiest of the firs for the middle west. 30' ABC.

—NORDMANIANA. (Nordman's Fir).

Large needles, dark green throughout the year. Very stately and handsome. Difficult to establish. Half hardy. 30' BC.

JUNIPER

JUNIPERUS—While we no longer recommend any of the Juniper family for windbreak planting, this group offers the widest field and the greatest possibilities of all hardy evergreens for ornamental planting. From the tall, formal pyramids of the *hibernica* type with natural growth as regular as a pillar, down to the prostrate *savin* which creeps on the ground; one may choose any form, color or size desired. Practically all of them are hardy, in sun as well as shade, and require no special soil treatment.

—CHINENSIS PFITZERIANA.

One of the most valuable of the spreading Junipers, forming a broad pyramid with horizontally spreading branches, and nodding branchlets. Leaves pointed and spreading, handsome brownish violet. 10-15' ABC.

COMMUNIS. (Common Juniper).

A wonderful species, containing many valuable horticultural varieties. Upright shrub or tree, spiny-pointed, dark blue, glaucous leaves; fine when used with the taller growing shrubs or for high points in the foundation planting. 25-40' ABC.

—var. canadensis. (American Juniper).

A handsome dwarf, of bushy, upright growth. Fine for foundation planting and with shrubs. 5-7' ABC.

—var. depressa. (Dwarf Juniper).

Most useful in covering banks or rocks. Leaves light green above, steel blue beneath, rarely growing more than four feet in height, with a spread of eight to ten feet. 4' ABC.

—var. hibernica. (Irish Juniper).

Columnar in growth, very trim and regular; branches upright and leaves light green. Fine for formal gardens and for cemeteries, though of questionable hardiness in the south. 8-10' BC.

—var. suecica. (Swedish Juniper).

Resembling *hibernica* but more bushy in growth and hardier. 7-8' ABC.

—SABINA. (Savin Juniper).

Being entirely hardy and easy to establish, this is probably most used among the low growing Junipers. Spreading or procumbent shrub form with slender branches and dark green leaves. Excellent for foundation work and for underplanting. 3-4' ABC.

—var. prostrata. (Prostrate Savin).

A pretty, prostrate form of Savin, excellent for covering banks, for rock work and in front of low evergreens. Not recommended on the lawn as the branches droop to the ground and are injured in mowing. 1-2' ABC.

—var. tamariscifolia. (Tamarisk-leaved Savin).

Good among rocks or for single specimens. Fine, needle-shaped foliage; bright green. Half procumbent branches of most distinct character. 2' ABC.

—VIRGINIANA. (Red Cedar).

Tapering and symmetrical; bronze foliage in fall and early winter. Hardy, but no longer recommended for wind-break because it harbors Cedar Rust, destructive to apple crops in surrounding orchards. Recommended for ornamental planting where large trees are desired. 25-30' ABC.

—var. glauca.

The compact, conical form of Cedar; its light, silvery blue foliage gives it distinct ornamental value. 10-12' ABC.

SPRUCE

PICEA—Including both ornamental and service types, this group, together with the Pines, constitutes the greater part of the evergreen planting of this region. All spruces grow in true pyramidal or conical form, generally becoming tall trees; valuable for timber, for windbreaks, and, with special reference to the Colorado varieties, ranking first in ornamental value. Spruce trees in nursery make a far better system of fibrous roots than the Pines and are therefore more easily transplanted.

—**Alba. (White Spruce).**

This is the true canadensis, native of our northern woods; a compact, upright grower. Seedlings vary considerable in color, some fairly rivaling the blue form of pungens. Succeeds best in Zone C. When planted in Zones A and B, it is often subject to the ravages of the red spider. 50-70' C.

—**CANADENSIS. (Black Hills Spruce).**

A local form of white spruce, for convenience listed as canadensis, native in the Dakota hills; more drouth resistant than the type; more dwarf and compact in growth; softer and finer foliage; quite often of more intense blue. 35-40' BC.

—**ENGELMANNI. (Engelman Spruce).**

One of the gems of Colorado; finer foliage and not as stiff branches as pungens; withstands extreme cold but unfortunately, soon loses its lower branches when planted in Zones A and B as it is unable to withstand our hot, dry winds of July and August. 80-100' C.

—**EXCELSA. (Norway Spruce).**

The most popular windbreak evergreen. Stands transplanting well; fairly rapid grower. Not specially recommended for ornamental planting because, as it grows old, it becomes thin and ragged in the top and loses much of its beauty. 75-90' ABC.

—**PSEUDOTSUGA. (Douglas Spruce).**

Tall, symmetrical, beautiful. The tree for the millions. Most rapid growing spruce. Wide variation of color when grown from seed, ranging from deep green to bright blue. 100-120' ABC.

—**PUNGENS OR PARRYANA. (Colorado Spruce).**

In our scramble for the shining blue forms, we are overlooking one of the most striking figures in any landscape. The strong, sturdy, upright growth, with horizontal branches in distinct and regular whorls or layers; its extreme hardiness; all count in rating this as one of the finest evergreens for specimen planting. 40-60' ABC.

—**var. glauca or Kosteri. (Koster's Blue Spruce).**

A grafted or selected form of pungens with silvery-blue foliage; otherwise identical. 30-40' ABC.

PINES

PINUS—Though still largely recognized by the tall growing species and used mostly in screen and windbreak planting; we are just beginning to appreciate their ornamental value and are commencing to work with the low growing forms for use in foundation planting and with shrubs. With the exception of White Pine, they root deeply, are shy of fibrous roots and therefore, unless handled with an earth ball, are more difficult to transplant than the spruces. They thrive in any well drained soil, can be used in more or less barren places, on dry uplands or on sandy plains.

—CEMBRA. (Swiss Stone Pine).

Handsome, hardy pine of slow growth and symmetrical habit while young. With old age, its broad, open, round-topped head is often picturesque. 30-40' ABC.

—MONTANA. (Mountain Pine).

Semi-dwarf, ascending branches densely clothed with bright green foliage similar to Scotch Pine. Ornamental as single specimens though best used as a filler with its dwarf variety, Mugho. 15-25' ABC.

—var. mugho. (Mugho Pine).

The low, regular, dwarf type of Montana; excellent for foundation planting and with low growing shrubs. It is especially recommended to furnish the rigid, formal body to the dwarf Juniper clumps. 4-6' ABC.

—NIGRA AUSTRIACA. (Austrian or Black Pine).

Its stout, spreading branches; its dark, rigid foliage; and, when old, its broad flattened top, place this species first among the tall growing pines for ornamental planting and second only to the White Pine for windbreaks and shelter. We should gladly recommend it more generally for windbreak planting except that without an earth ball, it is rather difficult to establish. 80-120' ABC.

—STROBUS. (White Pine).

The best pine for tall windbreaks. A handsome, graceful, five-needled American variety, with smooth, green bark. Very rapid growth. Stands transplanting better than any other pine. Quarantined against shipment west of the Missouri River on account of danger of White Pine Blister Rust infection. 35-50' ABC.

—SYLVESTRIS. (Scotch Pine).

Rapid growing, handsome when young, often used in windbreaks. Attractive yellow bark. Inclined to raggedness with approaching old age. 35-50' ABC.

JAPAN CEDAR

RETINISPORA—Originally from Japan; some species resembling Arbor Vitae and others like Juniper. Our experimental work with them so far has been very satisfactory, finding them hardier and less subject to winter injury than the Arbor Vitae. Very fine when used with the low growing Arbor Vitae and Juniper in foundation or mass planting.

—PISIFERA. (Pea-fruited Cypress).

Fine, feathery foliage but not as satisfactory with us as the horticultural varieties of this genus, given below. 5-7' C.

—var. plumosa. (Plume Cypress).

Very compact growth, with plume-like, blue-green foliage. Hardest of the group. 4-6' ABC.

—var. squarrosa. (Silver Cypress).

A dense, pyramidal bush with light, bluish-green foliage, almost silvery white when young, coloring violet in winter. Somewhat subject to discoloration during severe winters. 5-7' BC.

YEW

TAXUS—In England and parts of the East, the Yew grows in tree form upwards to sixty feet high, but the only varieties suitable to the middle west are the dwarf or shrub types. They prefer partial shade although on our home grounds they have been standing, without injury, for a number of years, in exposed places, in full sunlight. Handsome, dark, evergreen, broadened foliage and showy, red fruits.

—CANADENSIS. (American Yew).

Low, spreading, bushy form; short, rather broad, dark green leaves and red berries. 4-5' BC.

—CUSPIDATA NANA. (Brevifolia).

Hardest of the Yews. Branches ascending; dark green foliage. 5-7' ABC.

ARBOR VITAE

THUYA—Trees of narrow, pyramidal habit; low and bushy in many of the numerous garden forms; frond-like branchlets flattened and clothed with small, scale-like leaves. All of them stand pruning well and can, if desired, be sheared into grotesque shapes or trimmed to form a compact hedge. With a few exceptions, however, they are only half hardy in Zones A and B, often searing badly in winter and sometimes killing outright. Further north and east they seem to be perfectly hardy.

OCCIDENTALIS. (Common Arbor Vitae).

Narrow, pyramidal, compact head; short horizontal branches ascending at the ends. Light green to yellowish leaves, subject to winter injury. Where hardy, it is one of the best for evergreen hedges. 35-40' BC.

—var. globosa. (Globe Arbor Vitae).

Very compact, round head; dwarf and regular growth; good for strictly formal effect. Hardier than the type. 4-6' ABC.

—var. lutea. (Golden Arbor Vitae).

Very much like type, except that in spring the new leaves are bright yellow. Quite a number of yellow-leaved forms are grown; we don't specially recommend any of them on account of their sickly color after the first yellow glare is gone in spring. Generally have both Douglas and Peabody's Golden in nursery. 10-15' BC.

—var. pyramidalis. (Pyramidal Arbor Vitae).

Of columnar growth; distinct light green, compact foliage. Not entirely hardy. 15' C.

—var. Warreana. (Siberian Arbor Vitae).

Hardest of the entire Arbor Vitae group for this region. Pyramidal tree, darker and denser than type; branchlets short, rigid and much flattened; foliage dark green above, bluish-green beneath. 8-12' ABC.

—ORIENTALIS. (Biota).

Bushy, with spreading and ascending branches; slender branchlets and light green leaves. Though subject to winter injury the Biota have seared less in recent years than the common Arbor Vitae. 15-20' BC.

—var. pyramidalis.

Of pyramidal habit, with bright green foliage. Taller than the type. 20-25' BC.

HEMLOCK

TSUGA—A small genus, sometimes classed with the Firs. The most graceful of all our evergreens. They do not carry the stiff, formal appearance common among the conifers, but are stately and beautiful. The difficulty is in getting them established. They cannot withstand our hot sun and dry winds of mid-summer. Use them under larger evergreens or at least favor them with partial shade till well established.

—CANADENSIS. (Hemlock Spruce).

Tree of open, pyramidal habit, with spreading, irregular whorled branches. Handsome dark green foliage. Recommended for Zone A only when favored with partial shade. 30-40' BC.

Fruit Department

Your family must have fresh fruit to make up a well balanced ration. Besides the high value of fruit as food (and in this respect it ranks with the potato and other vegetables) every doctor will agree that fruit has great medicinal qualities.

The home orchard, consisting of a small number of judiciously selected and well-cared-for fruit trees, will not only supply the owner with all fruit needed at home, but will also pay him excellent cash returns for the labor expended in the care of the trees. When currants, cherries, gooseberries, raspberries, blackberries and strawberries sell at twenty-five cents and more by the quart; grapes at five cents per pound and apples at three to four dollars a bushel, **in the orchard**, the profit per acre is almost unbelievable. It is nothing unusual for a mature cherry tree to produce six bushels of fruit, or a mature apple tree to produce fifteen to twenty bushels annually. With forty to fifty trees per acre, it counts into figures. Apples and other fruits will continue to bring high prices. Keep planting a few fruit trees every year. You can't lose.

Watch for diseases and insects. Spray when necessary. This is highly important and yet so simple and easy. The only serious plant disease is fungus. Divide all injurious insects into two classes—devouring and sucking. Any boy who is able to recognize these three pests is able to take full charge of the spraying necessary for the family orchard and garden. To control fungus, use lime-sulphur. For devouring insects use Lead-arsenate. For sucking insects, use "Black-leaf 40" (Nicotine sulphate). All you need do is to mix the prepared ingredients with cold water and spray it on the trees or plants. If you require a considerable quantity of spray material, join your State Fruit Grower's Association and place your order with its secretary. If you require only a small quantity, see our representative or write us, we will supply you at cost.

Following is an extract from the Spray Bulletin of the Iowa State College, compiled after careful tests:

Calendar

Trouble	When to Treat	What to Use and How (Measure or weigh materials carefully)
Oyster shell, scurfy and San Jose Scale	If weather is cool, use in cluster bud spray with lead arsenate	4½ to 5½ gallons commercial lime sulfur, 50 gallons water. Never use lime sulfur with bordeaux
APPLE SCAB Curculio, spring canker worm, green fruit worm	CLUSTER BUD—When blossom buds have separated and before the individual blossoms have opened	LIME SULFUR 8 to 10 qts. lime sulfur 50 gal. water OR BORDEAUX 4 lbs. quick lime 4 lbs. copper sulphate 50 gal. water Written 4-4-50 3 lbs. lead arsenate paste or 1½ lbs. dry lead arsenate with any of the above formulas.
CODLING MOTH Apple Scab, curculio, spring canker worm	PETALS DROP OR CALYX—When 95% of the petals have dropped.	5 qts. lime sulfur. 2 lbs. lead arsenate paste or 1 lb. dry lead arsenate 50 gal. water
Codling moth, apple scab	SIDE WORM SPRAY—Three weeks after calyx spray	4½ qts. lime sulfur 50 gal. water Or bordeaux 3-3-50 2 lbs. lead arsenate paste or 1 lb. dry lead arsenate, with either
Second brood codling moth, sooty blotch, apple scab, apple blotch, black rot and other fungi	LAST SPRAY—Last of July or first of August Spray again in two or three weeks if "worms" are bad	Bordeaux 4-4-50 2 lbs. lead arsenate paste or 1 lb. dry lead arsenate

Currents and Gooseberries

Current worms on gooseberries and currants.	Just after blooming and again at first appearance of the worms	1 lb. lead arsenate paste, or ½ lb. dry lead arsenate 10 gal. water
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The above spray calendar is applicable for bearing apple, pear, plum and cherry trees. Plum and cherry bloom earlier. The last July spray is not necessary for plums, cherries and early apples. Bordeaux Mixture is recommended for the July spray, if used.

APPLES

To those who realize that Iowa and adjoining states have great apple producing areas, we submit a few government statistics: Iowa's annual apple crop is seven million bushels, worth three and one-half million dollars. Missouri is ahead of us; other adjoining states a little behind.

Colorado and Washington—the two famous apple producing states of the west—produce no more apples than Iowa and much less than Missouri. Our mid-west apples rank high in quality. During the season of 1919, The Iowa State Experiment Orchard at Council Bluffs produced a \$12,000 crop on a twelve acre apple orchard. Other commercial orchards paid equally well. When the large orchards pay on this basis, you can be absolutely sure that your little family orchard will pay even better returns per tree—**provided you take care of it.**

The apple is a long-lived fruit tree (40 to 60 years) and when fully grown requires plenty of room to mature big crops; therefore, never plant closer than thirty feet apart each way. If you "break joints" in every other row, the tops have still more room. In the south, peach trees make excellent fillers to plant between the apples when young, but farther north, small fruits or vegetables are best. Even corn will do but on no account sow grass or small grain in your orchard till the trees are at least five years old. Care and cultivation are absolutely essential when trees are young. A combination of fruit trees, small fruits and vegetables, is ideal and a big saving of labor, for care given one, benefits all three.

Spray at least once per year even while the trees are young. Combine lead-arsenate and lime-sulphur. Commercial orchardists generally spray four times each season but we figure that in the small orchard it is better to spray once and win than to resolve to spray four times and fail. Borers once in a tree must be gouged out with a wire. Paint the trunks of your trees with a strong solution of lime-sulphur mixed with soap-suds, in March, May and October, for borers, rabbits and mice.

Call on our representative in your district to explain any point you do not understand. He represents us in serving our customers as well as in the sale of our products. If you cannot reach him, write us. We encourage inquiries for we are interested in the success of our stock after you plant it.

A half acre, twenty-five trees, is the maximum number of apple trees recommended for the family orchard. Not more than five trees of the twenty-five should be summer and fall sorts; all the rest should be good winter varieties. Select from the following list, containing the very best for the middle west, arranged in the order in which they ripen fruit.

SUMMER APPLES

YELLOW TRANSPARENT—Fruit roundish; pale yellow; medium size and good quality. Early and regular bearer though of short ripening period. Much subject to blight when young and therefore succeeds best on thin soil. Last of June. ABC.

EARLY HARVEST—Fruit roundish; bright straw color; medium size; white flesh, tender, juicy and crisp; poor keeper. Last of June. A.

RED JUNE—Fruit red; medium to small; flesh white, juicy, fine flavor. The finest early eating apple. Tree slow grower, good bearer, covering a rather long ripening period. Ripens with us about July 1st. AB.

SWEET JUNE—Medium size; yellow; fine quality for table and cooking; Best early sweet apple. Early July. AB.

RED ASTRACHAN—Medium to large, flattened; marbled with crimson over green; rather acid, fine flavor. July. ABC.

DUCHESS OF OLDENBURG—Large, beautifully striped; flesh juicy and good, with rich sub-acid flavor. Very best summer cooking apple. Very early and heavy bearer. Early August. ABC.

BENONI—The best August eating apple, large, handsome red; deserving a place in every home orchard, north or south. August. ABC.

FALL APPLES

COLE'S QUINCE—Large, yellow and very fine. Favorite early fall eating and cooking apple. Better and much hardier than Maiden Blush. August and September. ABC.

MAIDEN BLUSH—Rather large, smooth, regular; red cheek on pale yellow skin. Flesh white, tender, pleasant. Not hardy. August and September. A.

STRAWBERRY (Chenango)—Medium size; oblong; color white, splashed with red. Very fine quality. September. ABC.

WOLF RIVER—The largest apple we grow and the poorest in quality. Red stripe, fairly good for cooking. September to November. ABC.

RAMBO—Medium size; yellow, striped with red. Fruit mild, tender, good—one of the fine old fall eating apples. September to November. A.

RAMSDELL SWEET—Rather large, oblong, dark red. Best fall sweet apple, sometimes called English Sweet. October to December. ABC.

FAMEUSE (Snow Apple)—Medium size, roundish, bright red, sometimes striped. Flesh snow white, very tender and fine. Excellent for dessert and cooking. October to December. ABC.

WEALTHY—Large, roundish, red, handsome, good quality. Best late fall apple for northern planters; good keeper in cold storage. Plant a few Wealthy, but not too many. October to January. ABC.

WINTER APPLES

DELICIOUS—Fruit large; crimson, blending with yellow at the blossom end where is found the five little knobs which easily distinguish this variety. Of very highest quality and flavor but a poor keeper unless in cold storage. Tree is a free grower, hardy, but very late in coming into bearing and generally a shy bearer in the middle west orchards. If you want Delicious to bear early and well, topwork on Virginia crab stock October to December. ABC. (See page 91).

GRIMES GOLDEN—Medium to large; yellow, exceptionally fine quality. One of the best early winter eating and cooking apples. Subject to bark rot at the crown, often destroying the tree when in full bearing. This crown weakness may be avoided by topworking Grimes on hardy stocks. November to January. A. (See page 91).

ROMAN STEM—Fruit medium, greenish-yellow. Excellent late-keeping dessert apple. Flesh tender, juicy, rich, with pear-like flavor. Blights some. December to April. ABC.

IOWA BLUSH—Fruit very small; red cheek on greenish-yellow skin; fair quality; finest tart. November to January. BC.

MISSOURI PIPPIN—Large; bright red with gray spots; fair quality; good bearer. December to March. A.

PARADISE WINTER SWEET—Large, blushed, very sweet and fine. Best sweet winter apple in quality though not as hardy as Tolman. December to March. A.

WINTER BANANA—Large; rather flat; beautiful yellow; flavor exquisite and tempting; highest quality. The least hardy of all apple trees in nursery. December to March. South A.

JONATHAN—Medium to large; bright red, beautiful; highest quality, fine flavor. The old standard red winter apple for all the region south of the latitude of Des Moines. Tree rather slender and slow growing but a good bearer and fine winter keeper. December to April. A. (See page—)

YORK IMPERIAL—Another fine red winter apple of high quality of the Jonathan type. Fruit large, red, good quality. December to April. A.

NORTHERN SPY—A fine apple but a shy bearer. Fruit large, yellow striped with red; quality very good. December to April. ABC.

MALINDA—Most valuable in the extreme north where winter apples of high quality and sufficient hardiness are scarce. Fruit medium size, rather pointed; yellow with faint stripe; fine grained and nearly sweet. Good bearer. December to May. BC.

WALBRIDGE—Fruit medium, fair quality; splendid keeper; rather late coming into bearing but afterwards a good annual bearer. Walbridge is one of the sorts that will soon be replaced by the valuable cross-bred, hardy apples of high quality, now being developed by the Iowa State College at Ames.

INGRAM—A mighty fine little apple of highest quality that ought to be planted in every home orchard. Seedling of Rawl's Genet which it surpasses in size and value. One of the earliest and heaviest bearers adapted to this region, often producing apples on three-year-old trees in nursery row. Very fine quality, like the old Genetin, and a splendid keeper. December to May. ABC.

RAWL'S GENET—Fruit small, striped, extra fine flavor. A good variety for the family orchard in zone A. December to May.

NORTHWESTERN GREENING—The standard and most popular apple of the north. Fruit very large, green; quality fair; fair keeper. Becoming more and more popular as a winter cooking apple, both north and south. December to May. ABC.

PEWAUKEE—The best hardy winter baking apple. Seedling of Duchess, therefore hardy and productive. Fruit very large, yellow splashed with red, fair quality. Should be more generally planted, especially in the north. January to May. ABC.

BEN DAVIS—Poor Ben is losing friends every year. Its quality has always been against it and now commercial men find that it is shorter lived than most other sorts. Still we recommend planting a tree or two in the family orchard for it is a faithful bearer and may furnish a crop when other sorts fail. December to May. AB.

GANO—Seedling of Ben Davis, practically identical with Black Ben; surpassing old Ben Davis a little in quality and a good deal in color, being dark red (no stripes); productive and a good keeper. December to May. AB.

MAMMOTH BLACK TWIG—Very large, dark red; superior to old Winesap, which it resembles in color, flavor and keeping quality. The fruit is rather flat; very heavy; skin rather oily late in the winter. December to May. A.

WINESAP—Fruit large, dark red, fine quality. Tree vigorous and spreading, sometimes subject to branch splitting. December to May. A.

STAYMAN WINESAP—Fruit very large, dark red; extra fine quality but a disappointment in many orchards on account of lack of hardiness. Ingram is not as large in fruit, but equal to Stayman in quality and superior to it in every other way for the family orchard. December to May. A.

TOLMAN SWEET—Best late-keeping winter sweet. Fruit large, pale yellow, good quality; hardy, vigorous and productive. December to April. ABC.

BLACK ANNETTE—Here's a dandy little apple for the northern family orchard to take the place of Jonathan where Jonathan lacks hardiness and the cost of Winterproof Jonathan is objected to. Fruit small, dark red underlaid with green; very fine quality. Heavy bearer; has a tenacious stem which prevents the wind from blowing off the fruit. Annette has never been boomed but is growing rapidly into favor in northern Iowa for family use. December to June. ABC.

SALOME—A good apple for the north but not very well known. Nearly equal to Wealthy in hardiness; fruit medium to large and uniform; purplish stripe; very good quality. January to July. ABC.

RUSSET—We grow two Russets—Colorado Orange and Wisconsin Golden; both of high quality and especially long keepers. Colorado Orange is smaller than Wisconsin Golden but of higher quality. December to June. ABC.

CRAB APPLES

Plant a few--not too many

WHITNEY—Large, early, fine for dessert or cooking; free from blight and immensely productive. Best and most popular crab apple. July to August. ABC.

BRIER SWEET—Fruit large; pale yellow; splashed with red; very sweet and rich. Best crab apple for preserving and canning. Plant Brier Sweet instead of the Siberian crab apples, which are so susceptible to blight. ABC.

FLORENCE—Large, handsome, crimson, splashed with red. Practically no blight. September. ABC.

WINTERPROOF APPLES

A Winterproof apple is not a new variety; it's a new method of propagation—topworking the best commercial varieties on the hardy Virginia crab stocks, producing a hardier, more vigorous, longer-lived and more prolific apple tree than when root grafted in the ordinary way. We make it possible for zones B and C to have just as good and as many Grimes Golden and Jonathan as can be grown in zone A, and the Winterproof process renders Delicious much more productive in all zones.

The present methods of fruit tree propagation (root grafting and collar budding) have been practiced by nurserymen only during the past sixty years. Before that time, during the whole of the first two hundred years' development of the Atlantic Coast states, orchards were started from seed. Of the millions of seedling orchard trees so planted, a very large percentage proved entirely worthless but from among them sprang all our good varieties of apples of today. Those apples were cross bred and adapted to the Atlantic Seaboard, where the climate is moist and equable; but many of them prove too tender or unfruitful for the more severe and changeable climate of the middle west. That's why we are without the long list of fine apples that can be successfully grown in the east. Since the early settlement of the Mississippi Valley, root grafted or budded apples have been planted in the orchards with no chance for cross breeding to produce hardier and better varieties.

But 'way back in the history of this region, before white folks settled here, wild crab apples grew along the creeks and streams, developed through a natural seedling evolution covering a thousand years, hardier than the oak. From such percentage came Virginia crab, the peer of stocks for topworking purposes.

Winterproof apples are propagated by first growing Virginia crab trees in nursery till two years old, then budding or grafting the desired commercial variety of apples in the tops of the Virginia trees, three feet above the ground. The entire trunk of the Winterproof tree is the hardy Virginia crab and the entire top is Grimes, Jonathan, Delicious, or whatever variety is desired. They are grown two years longer and the Winterproof tree for transplanting is then a two-year Jonathan, Grimes or Delicious on a four-year Virginia crab stem.

The great value of the Winterproof tree lies in its—

(1) **Greatly increased hardiness**—The hardy stock so influences the variety grafted in its top that half-hardy sorts like Grimes and Jonathan are entirely safe to transplant in zones B and C. (See zone map, page —) For increased hardiness we refer you to Mr. H. G. Street, Hebron, Ill., whose commercial orchard in southwest Wisconsin proves it.

(2) **Increased productiveness**—Sorts like Delicious, propagated in the ordinary way generally commence to bear the ninth or tenth year after transplanting; when worked on our Winterproof stock, bear the third year. We refer to Frank Harrington of Williamsburg, Iowa, for in his commercial orchard his topworked trees have enabled him to win first prize at the national and state apple shows.

VARIETIES OF WINTERPROOF APPLES

GRIMES GOLDEN—Topworked on Virginia, this splendid apple, besides being much hardier in the north, is entirely free from the crown trouble so seriously affecting Grimes on their own roots all over the country. Even the commercial orchard men, planting in the most favorable apple districts, realize the great need for a hardy stock for Grimes. Try it!

JONATHAN—Winterproof Jonathan can be safely planted anywhere in zones B and C, thus enabling our more northern customers to have as fine Jonathan, right in their own orchards, as our Missouri patrons enjoy.

DELICIOUS—Whether north or south, east or west, Winterproof Delicious is well worth the additional cost because it comes into bearing much earlier than when propagated on its own roots; bears heavier, and makes this the most valuable table and dessert apple in the world.

PEARS

Pear trees should not be planted in rich, black soil. Under such conditions they generally blight to death before fruiting, especially when cultivated. On clay or "white oak" soil, with no cultivation after trees are established, the pear succeeds in zone A and bears good crops. Pear is far hardier than peach or Japan plum. Its greatest enemy is blight. Blue grass sod or a tangle of raspberries are better for the pear trees than the cultivator. Kieffer and Garber are hardier than the others, and less subject to blight.

Plant pear trees twenty feet apart each way. Spray with lead-arsenate when slugs appear on the leaves and be sure to cut out and burn at once all blighted twigs as soon as they appear. Gather pears about two weeks before fully ripe, store them in a dark room and you have fruit of much better quality than if left to ripen on the tree.

BARTLETT—Most popular summer pear in the east. Large, yellow, blushed in sun; rich, buttery, fine flavor. August and September. A.

CLAPP'S FAVORITE—Large, fine fruit like Bartlett, though not so good quality; pale yellow with brown dots. August and September. A.

GARBER—One of the Jap hybrids. Earlier than Kieffer. Poor quality. September to October. AB.

SECKEL—Small, but one of the best in quality. Very productive. Fairly free from blight. September and October. AB.

DUCHESS d'ANGOULEME—Succeeds best as a dwarf. Fruit very large, greenish-yellow, russet spots. October to November. A.

BUERRE d'ANJOU—Large greenish-russet; excellent quality. One of the best late fall or early winter pears. October to December. A.

KIEFFER—This is the great canning pear of the south and most successful of all pears in the north and on a considerable variety of soils. Fruit large, golden yellow, often blushed. October to December. ABC.

FLEMISH BEAUTY—Large, pale yellow with red cheek; beautiful and delicious. One of the hardiest of the fine quality pears. With special care this variety succeeds in a small way in zone B and sometimes in zone C. October to December. AB.

DWARF PEARS—Are budded on Quince stocks. Less hardy than standards but bear earlier and more abundantly. Can supply Duchess, Anjou, Bartlett, Flemish Beauty and Seckel in dwarf pears.

PLUMS

Why is it that here in the Middle West seventy-five per cent of the amateur fruit growers make plum culture their hobby, or special "pet" among all hardy fruits? Because, by selecting a group of seven or thirteen trees of such varieties as Terry, Davenport, Burwood, Whitaker, Hammer and the like, planting them in a **clump or cluster** twelve feet apart, they become your friends about the second summer, for they will then bear early and well. Plums are surely fine eating out of hand; great for preserves and canning, and plum butter!—nothing is more appetizing and appealing during the long winter months than plum butter!

For your convenience we divide our plums into four groups, as follows:

AMERICANA GROUP

Clump planting is especially recommended for this group to insure heavy annual crops of fruit. Don't plant too many of one kind, and mix varieties well in the clump for stronger cross-fertilization of bloom. An ideal clump is made by planting one Hammer in the center, with Terry, Burwood, Davenport, Whitaker, etc., around it, all trees set twelve feet apart. **Hardly everywhere in any soil and location.** Recommended for the village or town lot as well as the farm for they don't take much room and surely pay high "pew rent." No matter what your horticultural disappointments may have been in the past, you can at least have plenty of good native and hybrid plums.

DAVENPORT—A fine, medium size yellow plum, originating in Iowa, parentage unknown; supposed to be a pure native but showing unquestioned cross with the prune—possibly the white prune. Bears a good crop every year. Flesh deep yellow, buttery, firm, freestone, with small prune-shaped pit; thin skin and very highest quality. Our "boys" at the nursery call it the "sugar plum," and we have a hard time to keep them away from the bearing Davenport trees during the ripening season. August and September. ABC.

DE SOTO—One of the old favorites. Fruit oval, medium size, orange color overlaid with crimson; many dots; yellow juicy flesh; quality good. August. ABC.

HAMMER—The best of the Miner sub-group. Fruit round-oval, large; red with many dots; thick skin; yellow flesh; fair quality. Trees inclined to overbear. A good fertilizer for other trees planted in the same clump. September. ABC.

TERRY—Leader of all native varieties in hardiness, vigor of tree, size and quality of fruit. An Iowa seedling introduced by us in 1902. Fruit very large (five and three-quarters inches in circumference); color clear red with small white dots; thin skin. Flesh juicy, very fine quality. August. ABC.

WHITAKER—Seedling of Wild Goose and hardier. The best very early plum. Fruit oval, large, bright red, thin skin; flavor sweet and good. When other Wild Goose sorts winter killed a few years ago, leaving Whitaker unharmed, we dropped the propagation of all other varieties of the Chickasaw sub-group. July. ABC.

WOLF—Another old favorite of Iowa parentage especially productive in eastern Iowa, in Illinois and Wisconsin. Oval, medium to large, red, thick skin, fair quality. August. ABC.

WYANT—A Waterloo, Iowa, seedling that has held its own so far in competition with the newer sorts, because of its great productiveness, good size and color (red) and remarkably fine quality. Early September. ABC.

JAPANESE GROUP

Bitter experience has caused us to cut our long list of Jap plums down to two, and we don't even recommend them. They can't stand the winters in the north. The hot dry weather during July and August kills them in the south. Even when you succeed in getting a good crop set on the trees, too often all the fruit rots before maturity. Plant Burwood instead. Burwood is half Jap—hardy, fruitful, practically free from rot and the fruit is just as large and fine as the finest pure Japs.

ABUNDANCE—Large, showy, beautiful fruit; bright red, very fine quality. Tree very upright in growth. July. A.

BURBANK—Large, red; flesh firm and meaty; rich and sugary. July. A.

EUROPEAN GROUP

Mostly of English origin, fairly hardy but subject to black fungus, curculio and rot in most sections. By watching closely, spraying often and removing the affected fruit as soon as it shows signs of rot, one might be fairly successful with European plums in a limited way.

GERMAN PRUNE—Large, long oval; much used for drying; color dark purple; very fine flavor. Last of August. AB.

GREEN GAGE—Small, greenish-yellow; the best of the yellow European group but not at all comparable with Davenport for this section. August. A.

LOMBARD—Large, oval, violet-red; juicy, meaty, fine quality. Very productive. Last of August. AB.

DAMSON—Small, dark purple, very productive; less rot than other Europeans. Early September. A.

TATGE—A seedling of Lombard which it closely resembles; larger but more subject to rot than its parent. Last of August. A.

HYBRID GROUP

Here's the place to come for the best new plums. The Williams' hybrids are recommended for all zones; while the Hansen hybrids, including Compass, we recommend especially for zone C—the extreme

north—where they may well take the place of cherries. All the Hansen hybrids except Hanska should be trained in bush form to increase productiveness.

BURWOOD (Williams)—The largest and best plum in America. Specimen fruit grown here measured six and one-half inches in circumference; as large and fine as the best of the pure Japs; hardy, fruitful and practically free from rot. The tree resembles a thrifty, young Early Richmond cherry. Fruit roundish, very large; color yellow almost entirely overlaid with red; flesh yellowish, firm as a peach; tender, juicy and of the very highest quality. Good shipper, valuable for market. Burwood offers you the opportunity to have real California plums in your own dooryard every year. Try it. Early September. ABC.

ROADSIDE (Williams)—Being one-third English Morello cherry, Roadside has a thinner skin, with less astringency than any other plum—native, Japanese or European. When canned the skins do not destroy the rich, mellow plum flavor. Large, round, bright red, very fine quality. "The plum without a pucker." Last of September. ABC.

RED GLASS (Williams)—A hybrid resulting from a cross with old Quakenboss, producing medium sized blue plums of fine quality, not much subject to rot. Rather shy bearer. Not entirely hardy in the extreme north. AB.

COMPASS—Sometimes called a cherry. A cross between the western sand cherry and Miner plum. A wonderfully early and prolific bearer but unfortunately Compass retains too much of the Sand Cherry flavor, making it unpalatable, except for canning. Not recommended except for the extreme north where better fruits cannot be grown. Fruit small, dark red and always abundant. Early August. C.

HANSKA (Hansen)—Crossing native plum with Chinese Apricot. Fruit small with heavy blue bloom; flesh yellow, firm and with fine Apricot flavor. Fairly productive. ABC.

SAPA (Hansen)—Crossing Sand cherry with Sultan (Japanese) Plum. Fruit small, dark purple; flesh dark purple; fair quality; almost as productive as Compass. BC.

OPATA (Hansen)—Crossing Sand cherry with Gold (Japanese) Plum. Fruit small, dark purplish-red; flesh green, firm and good quality. July. BC.

SAN SOTO (Hansen)—Crossing Sand cherry with De Soto plum. Fruit small, round, black; flesh yellowish-green. Similar to Compass though of somewhat better quality. BC.

CHERRIES

If you haven't a dry, well-drained soil, don't plant cherries. If your soil is well drained, plant more cherries! Being the first tree fruit on the market, there is always a big demand and at \$4.00 or more per bushel you won't lose money by planting more cherry trees.

We grow the best and most cherry trees found anywhere in the middle west. With no insects to bother and practically no disease, the cherry is the least bother and the surest crop of all tree fruits. If you watch for the first appearance of "yellow leaf" during a rainy season and spray at once with lime-sulphur, then you will have little

or no difficulty in maintaining a healthy, profitable orchard. Our cherry trees are all budded on hardy mahaleb stocks, guaranteed not to sprout from the roots. Plant cherry trees twenty feet apart each way.

SWEET CHERRIES

(Heart and Bigarreau)

BLACK TARTARIAN—Very large, glossy black; half tender, juicy rich and fine. Not hardy. Shy bearer. Last of June. A.

WINDSOR—Large, black; flesh firm, sweet and fine quality. Not hardy. Shy bearer. Middle of June. A.

YELLOW SPANISH—Large, apple yellow with red cheek; flesh firm, juicy, fine flavor. Not hardy. Shy bearer. Last of June. A.

SCHLEIHahn—The only black sweet cherry we can safely recommend for middle west planting. The original Schleihahn, imported from Europe about 1890 by Prof. Budd, stood on the campus grounds at the Iowa State College over twenty-five years, with fair crops of fruit, and even survived the terrible winter of 1898-99 with only partial injury. Schleihahn is highly recommended for family planting in all parts of zones A and B and even in zone C where favorable cherry soil is found. Fruit large, glossy, black, juicy, rich and very fine flavor. Tree moderately productive. No other nurseryman has genuine Schleihahn. Place your orders early for the supply is limited. AB.

YELLOW GLASS—Another fine sweet cherry of the Schleihahn type except color of fruit (yellow) imported by Prof. Budd direct to Ames about the time of Schleihahn. Large, perfect specimen trees of Yellow Glass twenty-five years old are found at Des Moines and at Sigourney—sound, healthy and productive. Neither Yellow Glass nor Schleihahn are new untried sorts. Both have stood the test in Iowa for more than twenty-five years. AB.

SOUR CHERRIES

(Duke and Morello)

DYEHOUSE—Very much like Early Richmond; a little earlier but not so productive. Early June. AB.

EARLY RICHMOND—Medium to large, red, early, good quality. Tree very hardy, immensely productive. Stick to Early Richmond for the bulk of your cherry planting. Middle of June. ABC.

MONTMORENCY—Larger and more solid than Early Richmond; light red. Ripens ten days later. Tree a very upright grower and inclined to be a shy bearer unless the leaders are pinched or pruned when the tree is young, to induce a more open and spreading top. Last of June to early July. ABC.

MORELLO (ENGLISH)—Large, late, nearly black, tender and juicy. Best cherry for preserves. Tree slow grower but very productive. Not recommended for the black soil regions of northern Iowa. Early August. AB.

NORTHWEST (BALDWIN)—Five days earlier than Richmond. Fruit large, very dark red, with firm red flesh of very fine quality. Tree more vigorous than Richmond though not as heavy bearer. Early June. ABC.

OSTHEIM—Fruit medium size, almost black when fully ripe; juicy, rich, almost sweet. Last of July. ABC.

TIMME—Northern planters are advised to plant Timme instead of Early Richmond. Timme is undoubtedly a seedling of Early Richmond, resembling it very closely in tree, fruit and season, but is more productive and longer lived in the north. Our propagating stock came from the Iowa State College, from full grown trees, just north of the Chemistry building. Recommended by the College as "better than Richmond for the north," and you can have implicit confidence in their recommendations. It has been fruiting for many years on the black soil of the College Campus where Early Richmond did not always prove satisfactory. Middle of June. ABC.

WRAGG—Identical with English Morello.

PEACHES

Don't stop planting peaches simply because the past few winters have been unusually severe. The same winters killed fall wheat, alfalfa, clover and other agricultural products. Even in zone B peach trees should be planted for family use. You can have home grown peaches nearly every year if you heed the following advice:

(1) Plant a few peach trees every year—on the poorest, highest land in the orchard.

(2) Train peach trees low; cut them back to a stub at planting time, and keep the tops low and open.

(3) Don't cultivate after the first year. The reason the peach is not as hardy as the apple is that it starts out too early in the spring and grows too late in the fall.

(4) In the fall, just before the ground freezes, bank earth around your peach trees, as high as possible. Then even if the winter kills the tops, there is no injury below your bank and by cutting back to sound wood, you don't lose your tree nor your crop.

Plant peach trees fifteen feet apart or use them as fillers between other young trees in the orchard. Very little trouble with insects or diseases on peach trees in this latitude.

ALEXANDER—Hardest of the early peaches; medium to large; greenish-white with deep red flesh; good quality; freestone. July. AB.

BOKARA—Medium size; yellow and red; freestone; good quality and keeper. Very hardy fruit bud. One of the best for northern planters.

CHAMPION—Very large, creamy-white with red cheek; sweet, juicy, very high quality. Fruit a little soft for distant shipment but in our judgment the hardest and most reliable peach for the north. Ranks first for home planting. Early August. AB and part of C.

CRAWFORD EARLY—Large, yellow with red cheek; flesh yellow and melting; excellent quality. Freestone. Early August. A.

CRAWFORD LATE—Large, yellow with dull red cheek; flesh yellow, quality good. Freestone. September. A.

CROSBY—Medium to small, bright yellow, streaked with red; good quality; heavy bearer. One of the extra hardy for northern planting. September. AB and part of C.

ELBERTA—Strong, stocky tree, very productive. Fruit large, yellow with red cheek; fair quality. The leading market variety in zone A but too tender for B and C. Early September. A.

FITZGERALD—Hardier and more reliable than Elberta in the north. Resembles Elberta in size, color and quality. Early September. AB.

HEATH CLING—Large, oblong, white; flesh white, cling, good quality. Middle September. A.

APRICOTS

If you can't have peaches, plant a few Russian Apricots. Plant twenty feet apart.

ALEXANDER (RUSSIAN)—Fruit large; yellow, flecked with red; flavor sweet and delicious. Early July. ABC.

BUDD (RUSSIAN)—Medium size; color yellow and red; good quality. Plant with Alexander. July. ABC.

MOORPARK (CHINESE)—Large fruit with orange skin; flesh yellow, juicy and delicious. July. A.

ROYAL (CHINESE)—Large, yellow, juicy, rich and good. Plant with Moorpark. July. A.

QUINCE AND NECTARINE

Not sufficiently hardy to grow in nursery here. Can generally supply Champion Quince and Boston Nectarine to our customers in the extreme south of zone A.

MULBERRIES

AMERICAN MULBERRIES—Are a failure with us. They kill during the extreme heat of summer, as well as the dry, cold winters. In small scattered areas they have been known to succeed fairly well but generally we cannot recommend them. The best varieties of American Mulberries are Downing and New American.

RUSSIAN MULBERRY—On the other hand, are in great demand and have great value to the mid-west planter not too far north. Largely used for screens and windbreaks; timber for posts and most popular to offer attraction to native birds, keeping the birds away from the more valuable fruit.

Small Fruit Department

In no part of the United States is there a better outlook for big profits from small fruits than in Iowa and her adjoining states. Although questions have sometimes arisen as to the advisability of commercial orcharding in the upper Mississippi Valley, no one ever doubted the value of small fruit plantings. We have the nearby market that most bush fruits require—a market that pays the best price in the country. The returns from small fruits come quickly, commencing the second season after planting and will take care of expenses, interest and taxes while the fruit trees are coming on.

GRAPES

All of us who cannot have peaches and quinces, may have grapes, for with our deep soil, bright sun and dry air, grapes attain their highest perfection.

Plant grapes deeply, eight feet apart, south slope where possible and prune severely every year, early in March. Never prune grapes after the frost is out in spring.

AGAWAM—Light red berry of good size; quality vinous and refreshing. One of the strongest growers—the best red grape for the middle west. Last of August. AB.

BETA—A northern seedling, crossed with wild grape and recommended only for the extreme north where the larger and finer grapes cannot be grown. Small berries on rather large bunches; blue; quality about midway between Concord and the common wild grape. C.

BRIGHTON—A fine red table grape, though less hardy and fruitful than Agawam. Middle of August. A.

CAMPBELL'S EARLY—Very large, fine grape of the Worden type; larger and earlier than Moore's Early, though not quite as hardy. Clusters large, berries large, black, thin-skinned and of very highest quality. Early August. AB.

CONCORD—Nearly black. Bunches and berries large and handsome. Most vigorous and productive grape grown. Quality, when fully ripe, very good. Fine for table, canning and for Grape Juice. If you have room for only one variety, by all means plant Concord. September. ABC.

MOORE'S DIAMOND—Earliest white grape. Large bunches and berries; fine for dessert. Late August. A.

MOORE'S EARLY—Ranks next to Concord in value for both home planting and commercial vineyard. Less vigorous and fruitful than Concord but earlier and somewhat better quality. Middle of August. ABC.

NIAGARA—The hardiest, white grape. Bunches large, berries medium to large; pale yellow; thin skin; sweet and pleasant. September. ABC.

POCKLINGTON—Bunch medium in size, berries large, golden yellow, very fine quality. September. AB.

WORDEN—A seedling of Concord, larger, sweeter and earlier than its parents but not so vigorous and prolific. Matures a week to ten days ahead of Concord, and always brings a good price on the market. Middle to last of August. ABC.

GOOSEBERRIES

Fifteen years ago our big plantation of fruiting gooseberries and currants made us money at \$1.00 to \$1.20 per bushel. Now they are worth \$3.50 to \$4.00 and more per bushel. Plant more gooseberries and currants for they are sure croppers, entirely hardy, free from disease, highly profitable. Any one in most any soil can grow them. Plant four feet apart, cultivate the same as the vegetable garden and give them a good dressing of manure occasionally. The ideal garden is enclosed by gooseberry and currant hedge, saving space and making the fence pay more than the garden. Watch for worms (caterpillars) in April and May. Give them a little lead-arsenate and they will not bother you any more. See spray calendar, page 85.

European varieties have been eliminated from our list because first, they are badly subject to mildew and not as profitable as the American sorts and, second, it is difficult now to import the European gooseberries.

CHAMPION—An Oregon seedling. Large, fruitful and of good quality. Try it. ABC.

DOWNING—One of the best of the white gooseberries. Large fruit, heavy bearer, fine flavor; vigorous and productive. Not valuable when ripe. ABC.

HOUGHTON—Medium to small berry but the most prolific of all and the easiest to pick. Thin-skinned; red when ripe; highest quality; best for preserves. ABC.

PEARL—Slightly larger than Downing which it resembles very closely. Fine for canning. Not valuable when ripe. ABC.

RED JACKET—Larger and finer than Houghton, its parent. Vigorous, productive; red when fully ripe; fine for preserves, and for table use. ABC.

CURRANTS

There is no jelly near as good as currant-raspberry. Be sure to have enough currants in the garden for home use—plant for profit too—it's a safe investment. They will do well in partial shade, between trees, along the garden fence, or, may be planted as a hedge between the lawn and garden. For market, plant four feet apart and enrich annually with rotted manure.

BLACK NAPLES—Best black currant. Esteemed by some for jellies but we greatly prefer the red kinds. ABC.

CHERRY—Large red berry on short bunches. Slow grower. Must have partial shade or is subject to leaf-burn during July and August. BC.

FAY'S PROLIFIC—Another large red berry or rather short bunches, that cannot stand our mid-west summers. When the leaves burn in summer, it discourages fruit and production for next year's crop; therefore not productive. BC.

LA VERSAILLES—The berries are small but the bunches are large and there are always lots of them. Fruit light red. Severe pruning of old wood increases the size of the berry and makes it more valuable. ABC.

PERFECTION—An unusually large red berry on good sized bunch; of the Fay type but better able to stand the hot summers. Fine for table use and promising for market, as soon as plants can be grown at lower cost. ABC.

POMONA—Our choice of all red currants for both home use and market. Large berries, full bunches of good size; bright red, small seed, very sweet and fine quality. The leaves endure our hot sun. Very productive. Plant more Pomona. ABC.

WHITE GRAPE—Very large white berry on long bunch. Productive, fine quality. The best white currant for home use. Not popular on market on account of color. No leaf injury. ABC.

RASPBERRIES

Naturally we are enthusiastic about raspberry culture. Our five-acre raspberry plantation pays the biggest dividend in the nursery and I do not believe there is forty acres in the state, devoted to general agriculture, that pays better than our five acres of raspberries.

One of the most palatable of all fruits, with no waste or extra work in canning; producing good crops every year; and surplus fruit selling on the market at \$6.00 to \$6.50 and more per crate—you will find a small raspberry patch a mighty profitable investment for you.

The plants are hardy, being commercially grown as far north as St. Paul and Minneapolis; it is easy of culture, succeeds on any well-drained soil. Should be planted very shallow three to four feet apart in rows seven or eight feet apart. Cultivate sparingly and never cultivate deeply for the roots are just below the surface of the ground. Allow the weeds to grow after the fruit is picked, for they will not hurt the plants and offer good winter protection. If mulched with straw early in June to conserve moisture, the last picking will be as plump and good as the first. The wood which fruited this year should be cut out and bunched at once after the last picking. The ideal place for raspberries is between the rows of young fruit trees in the orchard.

COLUMBIAN—Purple. No sprouts. Vigorous canes, very much like Haymaker. Early July. AB.

CUMBERLAND—Black. No sprouts. The best black cap. Largest berry (7-8 inch diameter); most productive; stands shipping well. Highly recommend. Early July. ABC.

CUTHBERT—Bright red. Sprouts from roots. Hardest and best of the light red raspberries. Should be planted at the end of the garden where sprouts can be better controlled. Plow often and deeply, keeping the sprouts out of the middles between the rows and you will have good crops. Middle July. AB.

GREGG—Jet black; no sprouts; hardy, vigorous and productive. Same season as Cumberland and nearly as valuable. ABC.

HAYMAKER—Purple; no sprouts. Our choice of the purple class. Strong canes; hardy and very productive. When ripe the fruit is purple; when canned is rich dark red and highest flavor of all raspberries. Early July. AB.

ST. REGIS (Everbearing)—Fruit red. Sprouts from roots. A bright red raspberry of the Cuthbert type, except that the fruit is formed on the current season's growth, producing a scattered crop of fruit continuously from June till September. Bears same year as planted. ABC.

MINNESOTA NO. 4—Sprouts from roots. A Minnesota seedling of unusual hardiness and fine quality. Recommended for the north to plant instead of Cuthbert, which is closely resembles. ABC.

BLACKBERRIES

The demand for this fruit has been greatly on the increase. Now is a good time to plant. Set them four feet apart in rows eight feet apart. Plow deep and often and keep the middles between the rows clear of sprouts. A good dressing of manure every winter will greatly increase the yield. All blackberries sprout from the roots. Succeed on only fairly well-drained soil.

ANCIENT BRITON—Hardy, vigorous and healthy. Fruit large and of fine quality. ABC.

EARLY HARVEST—Earliest blackberry. Not hardy north. Rather dwarf grower; productive, fruit medium size, good quality. A.

SNYDER—The best commercial blackberry. More planted than all others combined. Vigorous, productive, sweet and good. Extremely hardy. ABC.

MERCEREAU—Claimed to be the hardiest of all. We find the fruit larger and of finer quality than Snyder though not quite as productive. We consider Mercereau a good blackberry for family use. ABC.

STRAWBERRIES

Any good garden soil will grow fine strawberries. Sandy soil well enriched is ideal. We deliver strawberry plants in the spring only. Summer and fall shipments in this region are not generally successful.

We have eliminated from our list all varieties of strawberries which do not fertilize their own bloom, as we now have many fine "perfect" sorts. Plant two feet apart in rows four feet apart. Mark each row by placing a small stake at the end. As soon as the fruit is picked, mow all the tops off, plow up the bed, leaving only a four to six inch strip of young plants at one side of the original row. Following this method year after year you always have a young bed and lots of good fruit. Never allow the plants to run together into a solid bed for it is hard to keep clean and you get very little fruit except around the edges.

After the ground is frozen, say November 15th, mulch the plants with straw clean of weed seeds. Marsh hay or any clean litter will do. In the spring, rake this from the rows, leaving it between the rows to keep the fruit clean and to prolong the fruiting season. Fall bearing (everbearing) varieties should have all bloom removed till June 15th to secure the best summer and fall crop.

SPRING BEARING VARIETIES

DUNLAP—The big commercial berry of the middle west. Strong grower, enormous bearer; fruit large, conical, dark red; flavor sprightly and delicious. Commences to ripen after the earliest and continues to fruit until the late sorts are about gone. If you plant only one variety of spring-bearing for home use (and that's enough), choose Dunlap. ABC.

GIBSON—Large, well formed, delicious fruit. Clear red flesh. Holds its size well during the picking season. Strong grower, prolific and nearly rust proof. One of the best. Mid-season. ABC.

GLEN MARY—Another strong, vigorous grower of the Dunlap type. Fruit is slightly larger than Dunlap, mid-season, productive but requires more moisture for a big crop than the Dunlap. ABC.

PRIDE—A fine dark red, large, oblong berry produced on a vigorous, healthy plant. Commercial growers about Des Moines rank this as second only to Dunlap in value. Mid-season. ABC.

FALL BEARING (EVERBEARING) VARIETIES

After trying a number of different sorts, all highly praised by the introducers, we have cut our list down to two varieties. Except in the north we do not look to see the fall or everbearing varieties commercialized, since their formative and early fruiting period comes right in the midst of our annual July and August drouth. As a novelty for home use and for local markets in the north, we recommend them highly.

PROGRESSIVE—The best of the everbearing sorts. Healthy, vigorous and fairly productive. Stands the hot, dry weather better than the other sorts. Fruit deep red, medium size, very high quality. ABC.

SUPERB—One season only, since we have been fruiting the everbearing varieties, has Superb equalled Progressive. That was in 1915 when we had plenty of rain all summer. Further north, or under irrigation, Superb is as valuable as Progressive. ABC.

MISCELLANEOUS SMALL FRUITS

ASPARAGUS—Fall is the best time to plant Asparagus for quick results, though spring planting will do. Dig a narrow trench at least ten inches deep; fill the bottom with three inches **well rotted manure**; cover this with two inches black surface soil in which plant the Asparagus, leaving the trench open till the plants grow out. If planted in the fall, fill the trench with manure which should be removed in March. Set plants one foot apart in rows three feet wide. **Conover's Colossal** is most universally planted though **Palmetto** is also very fine for home use. ABC.

LUCRETIA DEWBERRY—The trailing blackberry. Fruit larger and sweeter than the blackberry; very productive, though somewhat difficult to pick. Should have slight winter covering in all sections. ABC.

DWARF JUNE BERRY—Fruit in clusters; blue-black when ripe. Sometimes called **Huckleberry**. Fine for canning and for birds. ABC.

RHUBARB—Easiest culture. Just what we need in spring for pies and sauce to thin our blood. Great medicine. Makes fine wine, too. We grow two kinds—**Victoria**, the tall coarse, pink-colored stems; and **Linneaus**, called Wineplant, stalks smaller, more tender and very fine quality. **Victoria** is best for market and most productive. Both entirely hardy. ABC.

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